JEAN M. SHEPARD
ACTING DIRECTOR

NANCY L. BOWEN, M.D., M.P.H
PUBLIC HEALTH OFFICER

County of San Diego

HEALTH AND HUMAN SERVICES AGENCY

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Disease Prevention/Health Promotion
Emergency Medical Services
HIV/AIDS Services
Medical Quality Assurance
Public Health Laboratory
PH Nursing/Border Health
TB & STD Control
Vital Records

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May 14, 2004

TO: Basic and Advanced Life Support Provider Agencies
Base Hospital Nurse Coordinators
Base Hospital Medical Directors
EMT-Paramedic Training Program Coordinators

FROM: Gary M. Vilke, MD, FACEP, FAAEM
EMS Medical Director
Division of Emergency Medical Services

NEW / REVISED 2004 EMERGENCY MEDICAL SERVICES TREATMENT PROTOCOLS / POLICIES

For the past year, many committees have been working to update the policies and protocols contained within the County of San Diego Emergency Medical Services Policy and Procedure Manual. We are pleased once again to present the complete manual on CD ROM. There is an additional CD ROM available to approved Continuing Education Training Providers that contains a training presentation on Intraosseous Vascular Access for pediatric patients and the optional skill, use of the External Pacemaker. Listed below you will find a list of the prehospital system ALS/BLS protocols affected by July 1, 2003 changes. Summaries of the ALS/BLS adult and pediatric treatment changes are included on the CD ROM. The table of contents reflects the documents that have been updated for July 1, 2004 implementation.

- **Revised ALS/BLS Treatment Protocols and Policies:**

  S-100 Introduction
  S-101 Glossary of Terms
  S-102 List of Abbreviations
  S-103 BLS/ALS Ambulance Inventory
  P-104 ALS Skills List
  S-105 Latex Safe Equipment List
  P-110 ALS Adult Standing Orders
  P-111 Adult Standing Orders for Communications Failure
  P-112 Pediatric ALS Standing Orders
  P-113 Pediatric Standing Orders for Communications Failure

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TO: All ALS Agencies and Paramedic Base Hospitals

FROM: Gary M. Vilke, M.D., FACEP, FAAEM
Medical Director, County of San Diego EMS

2004 PREHOSPITAL POLICY CHANGES

It has been brought to my attention that changes to the prehospital policies were not clearly incorporated into the update letter that accompanied the protocol and policy disk sent to all prehospital agencies this past month. Traditionally only the protocols are listed individually, while the policy changes are noted by the updated implementation dates. However, I am writing this letter to clarify some questions that have arisen within the EMS community.

The Medical Control policies that had changes to be implemented in 2004 include:

S-408 In section III A 1. "or" was changed to "and" to clarify the local scope of practice.

S-440 Change was from P-440 to S-440 to include EMTs as providers able to use Mark I kits, not just paramedics. There was no change in the language.

As there were no substantive changes to policies S-408, S-440, these policies will start on 7/1/04 as originally planned.

Because of the late notification of the changes to policy A-475, which does have included some operational changes derived from the most recent ambulance ordinance, implementation of this policy is to be suspended until further notice.

An additional issue was brought to my attention regarding two other policies, S-407 and S-601. There were no substantive changes to S-407 made this year other than clarifying the medical control for patients that have already arrived to a facility but have had delayed patient turn-over to that facility (section III F).

Section III G regarding prehospital patient records (PPRs) had raised concern among some providers during the current review process of recommended changes for policy S-601 at the prehospital/hospital meeting. There were no operational changes in the section applying to the PPR. The current S-407 policy, last updated 3/1/93, reads "An EMT-Paramedic accompanying patient(s) to a receiving hospital will remain with the patient(s) until medical management is assumed by the receiving hospital's medical staff **and will provide** such staff with a verbal report and **a completed Emergency Medical Services Prehospital Patient Record** with all
available field cardiac rhythm strips." The 2004 updated policy S-407 has not changed the expectation that the "**Emergency Medical Services Prehospital Patient Record**, including filed cardiac rhythm strips, **will be left with the patient**."

The proposed changes to S-601 were to bring this policy in line with the language that had been included in S-407 for the past 10 years. S-601 is still in the community review process through EMCC Prehospital / Hospital. If changes in policy S-601 are deemed necessary during the community input process, then would be the appropriate time to review S-407 to assure that it mirrors S-601. Based on the above information, I see no indication to hold up the implementation of S-407 at this time.

A number of other non-medical control policies have also been updated for 7/1/04. Please refer to the table of contents for any policies with a 7/04 implementation date.

I hope this clarifies some of the questions that have recently arisen.

Sincerely,

GARY M. VILKE, M.D., FACEP, FAAEM
Medical Director, County of San Diego EMS

GMV:bb

P-114 Pediatric MICU Inventory
P-115 ALS Medication List
P-117 ALS Pediatric Drug Chart
S-120 Abdominal Pain
S-121 Airway Obstruction
S-122 Allergic Reaction/Anaphylaxis
S-123 Altered Neurologic Function
S-124 Burns
S-125 Cardiac Arrest Unmonitored
S-126 Discomfort/Pain of Suspected Cardiac Origin
S-127 Dysrhythmias
S-129 Envenomation Injuries
S-130 Environmental Exposure
S-131 Hemodialysis
S-132 Near Drowning/Diving Incidents
S-133 Obstetrical Emergencies
S-134 Poisoning/Overdose
S-135 Pre-existing Medical Interventions
S-136 Respiratory Distress
S-138 Shock
S-139 Trauma
S-141 Pain Management
S-150 Nerve Agent Exposure

PEDIATRIC PROTOCOLS:
S-160 Airway Obstruction
S-161 Altered Neurologic Function
S-162 ALS/Allergic Reaction
S-163 Dysrhythmias
S-164 Envenomation Injuries
S-165 Poisoning/Overdose
S-166 Newborn Deliveries
S-167 Respiratory Distress
S-168 Shock
S-169 Trauma
S-170 Burns
S-171 Cardiac Arrest (Unmonitored non-traumatic)
S-172 Apparent Life Threatening Event
S-173 Pain Management

Please replace earlier copies of your EMS Policy Manual with the updated documents. Contact Merle Rupp at the EMS Division for questions related to documents in the EMS System Policy Manual.

Thank you.

GARY M. VILKE, MD, FACEP, FAAEM
EMS Medical Director
Division of Emergency Medical Services

GV:MM
Enclosure

County of San Diego Health and Human Services
Division of Emergency Medical Services

SUMMARY OF CHANGES TO ADULT ALS/BLS TREATMENT PROTOCOLS FOR JULY 1, 2004

	ADULT PROTOCOLS
	Changes that affect ALL adult protocols: ▪ Change IV order to read: IV SO adjust prn ▪ Combine Monitor EKG/O2 Sat and add prn ▪ Change watt/sec to joule (J) ▪ Change "mm Hg" to "systolic"
S120 Abdominal Pain (Non-Traumatic)	Add: ▪ For suspected intra-abdominal catastrophe or ?aortic aneurysm: IV 500cc bolus for BP<90 SO. MR to maintain BP 90 systolic SO ▪ BLS/ALS: consider transport to facility with surgical resources immediately available Delete: ▪ Note at bottom of protocol
S121 Airway Obstruction	Change IV and EKG Monitor/O_2 Sat as noted above
S122 Allergic Reaction/ Anaphylaxis	**BLS**: Delete: ▪ Teaching text from Latex Sensitive Patients **ALS** Change: • Format for easier reading ▪ Albuterol from MR x 1 SO and MR per BHO to MR SO ▪ Repeat Epi dose from BHO to SO (If no known cardiac disease and < 55 yo) ▪ Anaphylaxis - MR Epi SC dose from BHO to SO ▪ Epi IVP/ET from *BHPO* to BHO; MR dose from *BHPO* to BHO
S123 Altered Neuro Function (Non-Traumatic)	**BLS** Move information in the note at the bottom of the protocol to the BLS CVA/Stroke text Remove teaching text from Behavioral Emergencies **ALS** Change: ▪ Narcan from MR per BHO to SO ▪ Narcan titrating in opioid dependent pain management patients from *BHPO* to BHO ▪ Versed (IV and IM) from MR x1 in 10" per BHO to SO ▪ Versed IVP/IM in prolonged focal seizures without respiratory compromise from *BHPO* to BHO
S124 Burns	Change: ▪ For patients meeting burn center criteria - IV order from BHO to SO ▪ Albuterol from MR x 1 SO and MR per BHO to MR SO ▪ IV fluid replacement order to: For patients with ≥20% 2nd or ≥5% 3rd degree burns and ≥15 yo IV 500 ml in the first hr SO
S125 Cardiac arrest Unmonitored	Delete: ▪ ?Hypovolemia IV orders

S126 Discomfort/pain of suspected cardiac origin	Change: ▪ ASA dose from 160 mg to 162 mg ▪ NTG and MS for BP < 100 mm Hg from *BHPO* to BHO ▪ Fluid challenge to max 250ml with clear lung sounds, MR per BHO to Fluid bolus to max 250ml with clear lung sounds. MR x1 per SO ▪ Note at bottom to read: If any patient has taken Viagra/Sifenadil/Levitra or other medications for erectile dysfunction within 36 hours, NTG is contraindicated. Delete: ▪ Phrase "Treat Dysrhythmias ▪ ?Aortic Dissection IV orders
S127 Dysrhythmias	**Change throughout S-127**: ▪ Definition of unstable changed to read "(chest pain or dyspnea or altered LOC and BP<90 mm Hg)" **Unstable Bradycardia** Change: ▪ Pulse rate for Atropine administration from <40 to <60 ▪ Atropine IVP and ET from BHO to SO Add: ▪ If refractory to Atropine, External Cardiac Pacemaker, if available, may use *BHPO* ▪ If capture occurs sedate with Versed 1-5 mg IVP *BHPO* **SVT** Change: ▪ VSM MR order from BHO to SO ▪ Adenosine (all doses) to SO ▪ Adenosine for patients with history of bronchospasm or COPD change order from *BHPO* to BHO **Ventricular Ectopics** ▪ Delete protocol **Ventricular Tachycardia** **BLS** Delete: • CPR prn for stable VT • AED if available, may use for unconscious VT **ALS** Change: ▪ Lidocaine orders from BHO to SO ▪ Versed precardioversion orders from BHO to SO ▪ Synchronized cardioversion for conscious VT orders from BHO to SO **VF/Pulseless VT** Change: ▪ Post conversion VT/VF Lidocaine MR orders from BHO to SO Delete: ▪ Phrase: "with 20ml NS" from note at bottom of protocol
S129 Envenomation Injuries	Change IV order as noted above

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S130 Environmental Exposure	Change IV and EKG Monitor/O_2 Sat as noted above
S131 Hemodialysis	Change: ▪ $NaHCO_3$ from up to 1 mEq/kg IV push x 1 *BHPO* to 1 mEq/kg IV push x1 **BHO** ▪ $CaCl_2$ initial and repeat dose from *BHPO* to **BHO** Add: ▪ For Fluid Overload with Rales treat as per S-136
S132 Near Drowning/ Diving Incidents	**BLS** Add: ▪ Spinal immobilization when indicated **ALS** Change: ▪ IV order as noted above Delete: ▪ Intubate with inline spinal immobilization as indicated ▪ $NaHCO_3$ order
S133 Obstetrical Emergencies	Change: ▪ Eclampsia Versed IV and ET MR orders from BHO to SO Delete: ▪ Pitocin from ALS inventory
S134 Poisoning/Overdose	Change: ▪ Charcoal order from **BHO** to SO ▪ Charcoal exclusion list to read: isolated alcohol, heavy metal, hydrocarbons, caustic agents or iron ingestion ▪ Narcan for symptomatic ?opioid OD MR order from **BHO** to SO ▪ Narcan for symptomatic ?opioid OD in opioid dependent pain management patient order and MR order from *BHPO* to **BHO** Delete: ▪ Note at bottom of protocol ▪ The phrase, “Protect from Injury” from bottom of BLS column
S135 Pre-Existing Medical Interventions	Change: ▪ Previously established and labeled IV medication delivery systems with preset rates and/or other preexisting treatment modalities D/C order from *BHPO* to **BHO**
S136 Respiratory Distress	**BLS:** Add: ▪ “MR prn” aerosolized saline or water 5 ml via oxygen powered nebulizer/mask for Respiratory Distress with croup-like cough Change: ▪ Under Hyperventilation change “organic” to “underlying medical condition” **ALS:** ▪ Change: Format of medication orders to reflect BP parameters (NTG, Lasix and MS are SO for BP≥100 and **BHO** for BP < 100) ▪ If no known cardiac history and < 55yo: Change Epinephrine to MR in 10" SO (total 3 doses). ▪ NTG order from BP <100 mm Hg from *BHPO* to **BHO** ▪ Albuterol for respiratory distress with bronchospasm MR order from MR q10” **BHO** to MR SO

S136 Respiratory Distress (continued)	▪ Note at bottom of protocol to read: If any patient has taken Viagra/Sifenadil/Levitra or other medications for erectile dysfunction within 36 hours, NTG is contraindicated. Add: ▪ If patient on Bumex, give 100 mg. of Lasix
S-137 Sexual Assault	Reviewed without changes
S138 Shock	Change: • Hypovolemic IV order from 2 IVs wide open SO to IV 500 cc bolus for BP<90 SO, MR to maintain BP 90 systolic • ? cardiac etiology, septic shock fluid challenge order from 200 ml to 250ml with clear lungs sounds; Change MR order from BHO to SO
S139 Trauma	**BLS** Delete: • Assist ALS personnel with application and inflation of PASG as directed **ALS** Change: • IV order as noted above and add IV 500 ml fluid bolus SO. MR to maintain BP 90 systolic SO • Needle Thoracostomy indication and order to: Severe Respiratory Distress with unilateral absent breath sounds and systolic BP <90 in intubated or positive pressure ventilated patients: Needle thoracostomy per BHO. Delete under Traumatic Arrest: • IV orders • Phrase "Transport per *BHPO"*
S140 Triage, Multiple Patient Incident	Reviewed without changes.
S141 Pain Management	Reviewed with the following change made to **P-115 ALS Medication List**: • Move Standing Order Pain Management order contraindications from the Contraindication column to the Comments column and add that a *BHPO* is necessary
S150 Nerve Agent Treatment	**BLS** Add: • Self treat with Mark I kit if available **ALS** Add: • Valium Autoinjector for Moderate Exposure – MMST personnel only

County of San Diego Health and Human Services
Division of Emergency Medical Services

SUMMARY OF CHANGES TO PEDIATRIC ALS/BLS TREATMENT PROTOCOLS FOR JULY 1, 2004

	PEDIATRIC PROTOCOLS
	Changes that affect ALL pediatric protocols: ▪ Change IV order to read: IV SO adjust prn ▪ Combine Monitor EKG/O2 Sat and add prn ▪ Change "watt/sec" to Joule (J) ▪ Add Intraosseous route (IO) for fluid/medication administration in acute status patient protocols if unable to start an IV ▪ Delete medication/fluid challenge dosage from all medication/fluid challenge orders and replace with "per pediatric drug chart" followed by the type of order (e.g. Narcan per pediatric drug chart IV, IM SO) ▪ Delete cardioversion/defibrillation w/s/kg from all cardioversion/defibrillation orders and replace with "per pediatric drug chart" followed by the type of order (e.g. Synchronized cardioversion per pediatric drug chart *BHPO*)
S160 Airway Obstruction	Change IV and EKG Monitor/O_2 Sat as noted above
S161 Altered Neuro Function (Non-Traumatic)	Change: ▪ Narcan from MR per BHO to SO ▪ Narcan titrating in opioid dependent pain management patients from *BHPO* to BHO ▪ Versed (IV and IM) for seizures from MR x1 in 10" per BHO to SO ▪ Versed (Iv and IM) in prolonged focal seizures without respiratory compromise from *BHPO* to BHO
S162 Allergic Reaction	**BLS**: Delete: ▪ Teaching text from Latex Sensitive Patients **ALS** Change: ▪ Format for easier reading ▪ Albuterol from MR x 1 SO and MR per BHO to MR SO ▪ Anaphylaxis - MR Epi SC dose from BHO to SO ▫ Epi IVP/ET from *BHPO* to BHO; MR dose from *BHPO* to BHO Add: ▪ Repeat Epi doses (total of 3) SO for severe respiratory distress with bronchospasm or exposure to known allergen with previous severe reaction
S163 Dysrhythmias	**Add:** ▪ IO route for fluid/drug administration for all dysrhythmias except SVT **Unstable Bradycardia Protocol** Change: ▪ Epinephrine IV and ET orders changed from BHO to SO ▪ First dose Atropine IV and ET orders changed from BHO to SO **SVT Protocol** Change: ▪ VSM MR order changed from BHO to SO **VF/Pulseless VT Protocol** Change: ▪ Post conversion VT/VF Lidocaine MR orders from BHO to SO

County of San Diego Health and Human Services
Division of Emergency Medical Services

S164 Envenomation	Change IV order as noted above
S165 Poisoning/Overdose	Change: ▪ Charcoal order from BHO to SO ▪ Charcoal exclusion list to read: excluding isolated alcohol, heavy metals, hydrocarbons, caustic agents or iron ingestion. ▪ Narcan for symptomatic? opioid OD MR order from BHO to SO Delete: ▪ Note at bottom of protocol ▪ The phrase, "Protect from Injury" from bottom of BLS column
S166 Newborn Deliveries	Change: ▪ Format for easier reading ▪ Under "If HR remains <60 bpm after 30 seconds of ventilation, then intubate and CPR SO" to CPR and Intubate Replace: ▪ "Refer to S-163" with the treatment protocol from S-136 (Epi orders) if HR remains < 60 bpm after 30 seconds
S167 Respiratory Distress	**BLS** Add: ▪ "MR prn" to aerosolized saline or water 5 ml via oxygen powered nebulizer/mask for respiratory distress with croup-like cough Change: ▪ Albuterol for respiratory distress with bronchospasm MR order from BHO to SO ▪ Epinephrine MR order in severe respiratory distress or no relief from Albuterol/Atrovent from BHO to SO
S168 Shock	Change: ▪ IV Fluid challenge MR order from BHO to Fluid bolus per drug chart SO
S169 Trauma	Change: ▪ Needle Thoracostomy indication and order to: Severe Respiratory Distress with unilateral absent breath sounds and systolic BP < [70+ (2 x age)] in intubated or positive pressure ventilated patients: Needle thoracostomy per BHO Delete: ▪ Bypass/Diversion note at bottom of protocol delete the phrase "the Level I adult designated trauma facility." ▪ Under Traumatic Arrest: IV orders
S170 Burns	Change: IV fluid replacement order to: For patients with ≥10% 2nd or ≥5% 3rd degree burns: 5-14 yo IV NS 250 cc/hr SO <5 yo IV NS 150cc/hr SO
S171 Cardiac Arrest (Unmonitored)	**BLS** Change: ▪ AED use age from 8 years to ≥ 1year **ALS** ▪ IV order as noted above
S172 ALTE	Change ▪ Monitor blood glucose to "prn"
S173 Pain Management	Reviewed with the following change made to **P-115 ALS Medication List**: ▪ Move Standing Order Pain Management order contraindications from the Contraindication column to the Comments column and add that a *BHPO* is necessary ▪ Add "DDM" to note at bottom of protocol ▪ Change order of MS routes from PO, IM, IV to IV, IM, PO

COUNTY OF SAN DIEGO
DIVISION OF EMERGENCY MEDICAL SERVICES
POLICIES AND PROCEDURES
Master List

Policy Designators:	
A	Air Medical
B	EMT-1
D	EMT-D
N	Non Emergency Medical Transport
P	EMT-Paramedic
S	System - applies to all components of EMS system
T	Trauma Care System
L	Automatic External Defibrillator

000 - SYSTEMS

S-001 Emergency Medical Services System Compliance with State Statutes and Regulations **(7/04)**
S-002 Approval of Emergency Medical Services System Standards, Policies and Procedures **(7/04)**
S-003 Program Record Keeping: Training and Certification **(7/02)**
S-004 Quality Assurance/Quality Improvement for the Prehospital Emergency Medical Services System **(7/02)**
S-005 EMS Medical Director's Advisory Committee (Base Station Physicians' Committee) **(7/03)**
S-006 Prehospital Audit Committee **(7/01)**
S-007 Transfer Agreements **(7/04)**
S-008 Interfacility Transfers - Levels of Care **(7/02)**
S-009 Guidelines for the Prevention of Infectious and Communicable Diseases **(7/02)**
S-010 Guidelines for Hospitals Requesting Ambulance Diversion **(7/02)**
S-011 Prehospital Emergency Medical Services Certificated Personnel Affected by Local EMS Disciplinary Action **(7/04)**
S-012 Prehospital Emergency Medical Care Investigative Process **(7/04)**
S-014 Guidelines for Verification of Organ Donor Status **(7/01)**
S-015 Medical Audit Committee on Trauma **(7/02)**
S-016 Release of Patient Information/Confidentiality **(7/04)**
S-017 Downgrade or Closure of Emergency Services in a Hospital Designated as a Basic Emergency Receiving Facility **(7/03)**
S-018 EMS for Children (EMSC) Advisory Committee **(7/02)**

100 - TREATMENT GUIDELINES AND PROTOCOLS

SECTION I

S-100 Introduction **(7/04)**
S-101 Glossary of Terms **(7/04)**
S-102 List of Abbreviations **(7/04)**

COUNTY OF SAN DIEGO
DIVISION OF EMERGENCY MEDICAL SERVICES
POLICIES AND PROCEDURES
Master List

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200 - AIR MEDICAL TREATMENT PROTOCOLS

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300 - EDUCATION

P-300	EMT-Paramedic Training Program Student Eligibility **(7/02)**
P-301	EMT-Paramedic Training Program Requirements and Procedures for Approval **(7/96)**
P-303	Mobile Intensive Care Nurse Authorization/Reauthorization **(7/04)**
P-305	EMT-Paramedic Accreditation in San Diego County **(7/03)**
S-306	Designation of Authorized Providers of Continuing Education for Emergency Medical Services Personnel **(7/02)**
S-307	Continuing Education for Prehospital Personnel **(1/95)**
D-320	Defibrillation Training Program Student Eligibility (EMT/PS) **(7/03)**
D-321	Emergency Medical Technician/Pubic Safety-Defibrillation Training Program Requirements **(7/03)**
D-322	Emergency Medical Technician/Public Safety-Defibrillation Accreditation **(7/03)**
D-325	Esophageal Tracheal Airway Device Training Program Requirements **(7/03)**
B-326	Esophageal Tracheal Airway Device Student Eligibility **(7/03)**
B-327	Esophageal Tracheal airway Device (ETAD) Accreditation **(7/03)**
B-351	EMT Training Programs **(7/02)**
B-352	EMT-I Certification/Recertification **(7/98)**
L-360	Deleted **(7/03)**

400 - MEDICAL CONTROL

S-400	Management of Controlled Drugs on Advanced Life Support Units **(7/03)**
P-401	Scope of Practice of EMT-Paramedic in San Diego County **(7/00)**
S-402	Prehospital Determination of Death **(7/03)**
P-403	Physician on Scene **(7/02)**
P-405	Communications Failure **(7/02)**
A-406	Determination of Death **(7/02)**
S-407	Triage to Appropriate Facility **(7/04)**
P-408	Variation From San Diego County Protocols for Advance Life Support **(7/04)**
S-409	Reporting of Issues in Patient Care Management **(7/03)**
P-410	San Diego County Special Assignment - EMT-Paramedic **(7/02)**
S-411	Reporting of Suspected Abuse **(7/01)**
S-412	Consent for Prehospital Treatment and Transport **(7/03)**
S-414	Do Not Resuscitate - DNR **(7/01)**
S-415	Base Hospital Contact/Patient Transportation and Report **(7/01)**
S-416	Supply and Resupply of Designated EMS Agencies and Vehicles **(7/01)**
D-418	Emergency Medical Technician/Public Safety-Defibrillation Equipment **(7/03)**
D-420	Transfer of Specific Patient Care Information Between Emergency Medical Technician/Public Safety-Defibrillation and Transport Personnel **(7/03)**
D-421	Deleted **(7/03)**
S-422	Application of Patient Restraints **(7/02)**
S-440	Utilization of Nerve Agent Exposure Drugs **(7/04)**
B-450	Emergency Medical Technician-I Scope of Practice **(7/03)**
T-460	Identification of the Trauma Center Candidate **(7/01)**
T-460 (a)	Trauma Decision Tree Algorithm **(7/01)**
A-475	Air Medical Support Utilization **(7/04)**

COUNTY OF SAN DIEGO
DIVISION OF EMERGENCY MEDICAL SERVICES
POLICIES AND PROCEDURES
Master List

600 - DATA COLLECTION

S-601	Communication and Documentation of Prehospital Patient Care Information **(7/01)**
D-620	Emergency Medical Technician/Public Safety-Defibrillation Data Collection and Evaluation **(2/99)**
D-621	Transfer of Patient Data/Medical Record **(2/99)**
D-622	Esophageal Tracheal Airway Device Data Collection and Evaluation **(2/99)**

700 - BASE HOSPITAL/TRAUMA CENTER

P-701	EMT-Paramedic Base Hospital Designation **(7/98)**
P-702	Dedesignation of an EMT-Paramedic Base Hospital **(7/98) REV**
T-703	Trauma Care Fund **(7/02)**
T-705	Trauma Catchment Service Area **(7/02)**
T-706	Role of the Pediatric Trauma Center **(7/02)**
T-708	Trauma Care Coordination Within the Trauma System **(7/02)**
T-710	Designation of a Trauma Center **(7/02)**
T-711	De-designation of a Trauma Center **(7/02)**
T-712	Trauma Center Bypass **(7/02)**
T-713	Resources for Trauma Team Response **(7/02)**
T-714	Trauma Service Consultations for the Community **(7/02)**
T-716	Transfer of Stable Trauma Service Health Plan Members **(7/02)**
T-717	Trauma Center Injury Prevention Activities **(7/02)**
T-718	Public Information & Education on Trauma Systems **(7/02)**
T-719	Trauma Provider Marketing and Advertising **(7/02)**
D-720	EMT/PS-D Base Hospital Designation **(3/91)**
D-721	Quality Assurance for Emergency Medical Technician/Public Safety-Defibrillation **(2/99)**

800 - SERVICE PROVIDER AGENCY

P-801	Designation of Providers of Advanced Life Support Service **(11/96)**
S-803	Recovery of Prehospital Patient Care Reusable Equipment **(7/99)**
P-804	Alternate EMT-Paramedic Service Provider Application/Designation **(9/91)**
P-805	Advanced Life Support First Responder Units **(7/04)**
P-806	Advanced Life Support First Responder Inventory **(7/04)**
D-820	Emergency Medical Technician/Public Safety-Defibrillation Service Provider Designation **(7/03)**
D-822	Esophageal Tracheal Airway Device Service Provider Designation **(2/99)**
S-830	Ambulance Provider's Permit Application Process **(7/03)**
S-831	Permit Appeal Process **(6/93)**
B-833	BLS Ground Ambulance Vehicle Requirements **(7/03)**
S-835	Requirements for Ground Critical Care Transport Services **(7/02)**
S-836	Critical Care Transport Unit Inventory **(7/02)**
N-840	Non Emergency Transport Provider's Permit Application Process **(7/03)**
N-841	Non Emergency Medical Transport Service Requirements **(7/03)**
B-850	Basic Life Support Ambulance Service Provider Requirements **(7/04)**
A-875	Prehospital EMS Aircraft Classification **(7/04)**
A-876	Air Ambulance Dispatch Center Designation/Dispatch of Air Ambulance **(7/04)**
A-877	Air Ambulance Service Provider Authorization **(7/04)**
A-878	Combined in A-876 **(7/04)**

SUBJECT: EMERGENCY MEDICAL SERVICES SYSTEM COMPLIANCE WITH STATE STATUES AND REGULATIONS **Date: 07/01/04**

I. Authority: Health and Safety Code, Division 2.5, Section 1797.220.

II. Purpose: To assure compliance for the emergency medical services (EMS) system with applicable State Statutes and Regulations.

III. Policy: The County of San Diego's EMS system and all its components shall comply with all State of California Statutes and Regulations regarding emergency medical services.

Approved:

Administration **Medical Director**

SUBJECT: APPROVAL/IMPLEMENTATION OF EMERGENCY MEDICAL SERVICES SYSTEMS STANDARDS, POLICIES AND PROCEDURES **Date: 07/01/04**

I. Authority: Health and Safety Code, Division 2.5, Sections 1797.220 and 1798.

II. Purpose: To approve standards, policies, and procedures for the Emergency Medical Services (EMS) system.

III. Policy:

A. EMS system standards, policies, and procedures shall be approved by the County of San Diego EMS Medical Director, or the Director of the Health and Human Services Agency, or designee, after review and comment by the Emergency Medical Care Committee (EMCC).

B. All standards, policies, and procedures regarding medical control and medical accountability shall be approved by the County of San Diego EMS Medical Director, after review and comment by the EMS Medical Director's Advisory Committee (Base Station Physicians' Committee). This includes but is not limited to:

1. Treatment and triage protocols;
2. Prehospital patient report;
3. Patient care reporting requirements;
4. Field medical care protocols.

C. Providers shall be notified a minimum of forty-five (45) days prior to implementation of new or revised policies.

D. It is preferred that implementation of new or revised policies take place annually in July.

Approved:

Administration **Medical Director**

SUBJECT: PROGRAM RECORDKEEPING: TRAINING AND CERTIFICATION **Date: 7/1/02**

I. Authority: Health and Safety Code, Division 2.5, Sections 1797.204 and 1797.208.

II. Purpose: To identify specific records to be maintained by the Division of Emergency Medical Services regarding EMT-I certification, EMT-P accreditation, EMT/PS-D accreditation, MICN authorization, AED authorization, county approved continuing education (CE) providers and training programs.

III. Policy:

A. The Division of Emergency Medical Services (EMS) shall maintain on its premises for a minimum of five (5) years, the following records:

1. Approved EMS training program documentation including:
    a. Application form and accompanying materials.
    b. Copy of written approval from Division of Emergency Medical Services.
2. A list of current EMS Training Program medical directors, course directors, and principal instructors.
3. A list of all prehospital field personnel currently certified/accredited/authorized by the County of San Diego Emergency Medical Services Director.
4. A list of all field prehospital field personnel whose certificates have been suspended or revoked.
5. A list of approved CE providers, including approval dates.

B. The Division of Emergency Medical Services shall submit annually, in January, to the State Emergency Medical Services Authority, the following:

1. The names, addresses, and course directors of each approved EMS Training Program.
2. The number of currently certified EMT-I's**,** EMT-D's, EMT-D/C's, accredited EMT-P's, EMT/PS-D's and authorized MICN's in San Diego County.

C. The State Emergency Medical Services Authority shall be notified in writing of any changes.

D. The State EMS Authority shall be notified in writing of all reportable actions taken regarding a certificate holder's certificate, according to regulation.

Approved:

Administration **EMS Medical Director**

SUBJECT: QUALITY ASSURANCE/QUALITY IMPROVEMENT FOR THE PREHOSPITAL EMERGENCY MEDICAL SERVICES SYSTEM **Date: 07/01/02**

I. Authority: Health and Safety Code, Division 2.5, Sections 1797.204, 1797.220, 1798, 1798.100 and 1798.102.

II. Purpose: To identify the primary responsibilities of the San Diego County Division of Emergency Medical Services (EMS) in achieving optimal quality of prehospital care for patients accessing the County's EMS system.

III. Policy: The Health and Human Services Agency, Division of EMS, shall be responsible for monitoring EMS prehospital programs for compliance with EMS system standards, policies and procedures and protocols. This shall be accomplished by the following:

A. Agreements with Base Hospitals and EMS service providers requiring, but not limited to, the following:

1. Compliance with all the provisions listed in the California Code of Regulations, (Title 22, Division 9 - Prehospital Emergency Medical Services), and
2. Compliance with all San Diego County EMS system policies, procedures and protocols, and
3. Active participation in the County's regional Quality Assurance/Quality Improvement (QA/QI) process, and
4. Reporting of significant issues in medical management to the EMS Medical Director.
    a. Incidents in which medications or treatments are provided which are outside approved treatment protocols shall be reported to the regional QA/QI system by base hospital and/or agency personnel in a timely manner. These incidents are also reported at the Prehospital Audit Committee.
    b. Actions outside the scope of prehospital personnel and actions or errors resulting untoward patient care effects, such as errors in the administration of medications, invasive procedures, defibrillation/cardioversion, or other patient treatment, shall be reported to the EMS Medical Director within 48 hours.

Approved:

Administration **EMS Medical Director**

5. Development and implementation of internal mechanisms to monitor, identify, report and correct quality issues.
6. Implementation and maintenance of a Quality Assurance Program approved by the Division of EMS.

B. These agreements shall provide the authority for the EMS Division to

1. Perform announced and unannounced site surveys of base hospital and EMS providers,
2. Review patient care records necessary to investigate medical QA/QI issues, and
3. Observe and trend the performance of EMS personnel randomly or as needed.

C. Additionally, the EMS Division shall:

1. Support regional QA/QI committees (such as Prehospital Audit Committee, Medical Audit Committee, etc.), and
2. Attend base hospital meetings
3. Periodically monitor prehospital continuing education
4. Perform random audits of prehospital forms~~;~~

D. The San Diego County Division of EMS shall maintain and promote the adoption of the "Quality Improvement Guidelines for EMS System Participants in San Diego County" (attachment) by all EMS system participants.

ATTACHMENT: Quality Improvement Guidelines for EMS System Participants in San Diego County

Approved:

Administration **EMS Medical Director**

SUBJECT: QUALITY ASSURANCE/QUALITY IMPROVEMENT FOR THE PREHOSPITAL EMERGENCY MEDICAL SERVICES SYSTEM **Date: 07/01/02**

QUALITY IMPROVEMENT GUIDELINES FOR EMS SYSTEM PARTICIPANTS IN SAN DIEGO COUNTY

I. Purpose: The purpose of this guideline is to define, for all EMS system participants, the general responsibilities of EMS system participants in implementing an effective systemwide continuous quality improvement plan for San Diego County.

II. Definitions:

A. Continuous Quality Improvement (CQI) – an ongoing method of evaluating medical services provided by EMS system participants, which includes defining standards, evaluating services against those standards, and utilizing the results of this evaluation for improving patient care. Such methods may include, but are not limited to, a written plan describing the program objectives, organizational structure as it relates to quality of care, and the scope and mechanism for overseeing the effectiveness of the program.

B. Standards of Care – The services that the local community expects will be provided to patients. These include therapeutic services (treatment protocols), health care professionalism (patient respect, confidentiality), and safety.

C. Patient Care Team – The group of individuals who provide care or service to an EMS patient, including law enforcement, first responders, EMT-I's, EMT-P's, MICN's, transport RN's, physicians and others.

D. Prehospital Personnel – All personnel participating in the delivery of prehospital patient care. This includes dispatchers, EMT-I's, EMT-P's, MICN's, transport RN's, and Base Hospital Physicians.

III. Guideline:

A. Mission of the San Diego County Prehospital Continuous Quality Improvement (CQI) Program: To provide a mechanism by which the prehospital medical services offered in San Diego County are continuously reviewed, evaluated, and revised as necessary such that the highest standards of medical care are maintained.

B. Roles of EMS System Participants

1. EMS Agency - *Mission Statements*:

To facilitate a systemwide QI program to monitor, review, evaluate and improve the quality of prehospital care in San Diego County. This will be accomplished through activities which involve all system participants in the prospective, concurrent, and retrospective review of that system, with continuous feedback to the system.

To facilitate educational activities that ensure that the basic training and continuing education programs remain of highest quality, responsive to the needs identified through the CQI process.

To coordinate/facilitate system research activities.

2. Service Provider Agency

Mission: To provide the staff, tools and work environment necessary to facilitate the provision of quality prehospital care, including a proactive role in supporting medical quality improvement, client satisfaction, and improved patient outcome.

a. Prospective QI:

1. To develop or adopt patient care standards, in collaboration with other system participants, designed to enhance the delivery of patient care.
2. To ensure that employees are oriented to and comply with the San Diego County EMS system QI program.
3. To ensure that field personnel receive updated training in the San Diego County EMS Scope of Practice, treatment protocols, and policies.
4. To establish an in-house QI process for operational activities.
5. To work with medical control personnel (EMS medical director, base hospital staff, etc.) to implement a medical QI program that interfaces with the regional QA/QI system.
6. To regularly review and revise in-house policies as necessary.
7. To actively participate in the review and revisions of EMS agency policies as needed.

b. Concurrent QI

1. To provide for ongoing evaluation of field personnel performance.
2. To monitor field/medical control communications.
3. To ensure availability of continuing education and skills improvement opportunities.
4. To communicate to EMS agency relevant performance variations. (P-409).

c. Retrospective QI

1. To review patient care records for compliance with agency policy, medical protocols, standards of care, and identified quality issues.
2. To recognize, reward, and encourage the positive provision of prehospital care.
3. To intervene with field personnel whose performance does not meet performance expectations. This may include referral of some issues for further action by the EMS agency.
4. To audit critical skills and situations (non-transports, pediatric patients, ALS skills, etc.) to ensure continued provision of quality care, and to provide remedial training as necessary.
5. To assist, where possible, the EMS system in its efforts to undertake research studies and focused audit activities.
6. To encourage field personnel to follow-up on the outcome and results of their patient interventions.

3. Prehospital Field Personnel

Mission: To work within the EMS CQI process to ensure that care provided is of the highest quality achievable, and to support, as professionals, the continued enhancement of prehospital care within the communities served.

a. Prospective QI

1. To maintain awareness of the "Standards of Care" in the prehospital setting.
2. To assume responsibility for professional growth and development.

3. To continually evaluate standards of care to identify opportunities for optimization.
4. To continually analyze personal performance in providing patient care services with the intent to identify areas of diminished skill, and initiate self-education activities to remediate.
5. To become aware and involved in the provider agency's QI process, as well as the San Diego County systemwide QI process.
6. To support the clinical education of new professionals through internship, mentorship, and critical discussion.

b. Concurrent

1. To, at the time of service, continuously evaluate the quality of care provided to each patient, every time, and to recognize changes in patient status and revise the plan of care accordingly.
2. To be a patient advocate; always consider "what is best for this patient."
3. To provide excellence, without discrimination, in the care of each patient.
4. To respect the knowledge, roles, and responsibilities of all other patient care team members.
5. To communicate professionally, i.e. to provide documentation and other communication to all members of the patient care team.

c. Retrospective

1. To recognize areas for improvement in the Standards of Care, and work to revise them accordingly.

Approved:

Administration **EMS Medical Director**

2. To participate actively in the retrospective review/audit of patient care activities.

3. To provide feedback to appropriate participants of the EMS system.

Base Hospital

Mission: Working with the community, EMS provider agencies, members of the EMS community, and the local EMS agency, to continuously promote excellence in the quality of prehospital care through medical quality improvement activities, on-line medical control, and community education.

a. Prospective

1. To participate in the development of patient care standards.

2. To ensure that all base hospital agency personnel receive adequate orientation to clinical and operational expectations of the role.

3. To provide medical leadership, assisting the EMS Medical Director and provider agencies in formulating or revising Standards of Care.

4. To recognize areas of potential professional or clinical growth in other team members, and provide educational opportunities for these professionals to learn.

5. To implement a QA/QI process that is collaborative, fair, non-punitive, consistent and provides feedback to the EMS system.

b. Concurrent

1. To assume responsibility for providing on-line medical direction for field personnel that is of highest quality and in the best interests of the patient.

2. To communicate professionally; provide documentation and other communication to all members of the patient care team.

c. Retrospective

1. To analyze system performance to identify opportunities for research.
2. To communicate professionally; provide documentation and other communication to all members of the patient care team in a timely manner. This includes collaboration with the CQI activities of the San Diego County Trauma System.
3. To analyze patient care documentation, identifying services provided in variance with the Standards of Care.
4. To review patient care records for compliance with agency policy, medical protocols, Standards of Care, and identified quality issues.
5. To recognize, reward, and encourage the positive provision of prehospital care.
6. To review with prehospital personnel any performance which may not meet standards of care expectations. This may include referral of some issues for further action. If further action is required, notification will be made to the appropriate agency personnel.
7. To monitor compliance with medication administration and skills procedures, and compliance with local policies to assure continued provision of quality care, and to facilitate remedial training as necessary.
8. To assist the EMS system in its efforts to undertake research studies or focused audit activities.
9. To provide timely feedback to relevant EMS system participants regarding the agency's QI findings and activities.
10. To encourage field personnel to follow-up on the outcome and results of their patient interventions.
11. To facilitate and coordinate the collection of data for EMS system research.

5. Receiving Hospitals (non-base)

Mission: To support the improvement of quality prehospital care through communication, participation

and proactivity in the regional CQI process.

a. Prospective

1. To remain knowledgeable of the San Diego County EMS system, including an awareness of system policies, QI process, and patient care team expectations.
2. To provide educational opportunities for field personnel that are relevant to patient care issues identified by receiving hospital, or ensure such needs are communicated to the base hospital or EMS agency.

b. Concurrent

1. To provide information to the EMS system regarding the individual facility's special resources such that patients requiring such services may be directed to the most appropriate facility.
2. To maintain ongoing dialogue with the EMS agency, Base Hospital, Field Provider agency, and prehospital personnel to identify areas for possible system improvement and increased quality of patient care.

c. Retrospective

1. To facilitate providing data and information to support system research activities and quality improvement activities.

6. Approved Training Agency or Continuing Education Provider

Mission: To take a proactive approach in their training of EMS personnel to meet the changing needs of EMS. This training will provide the student with the tools necessary to successfully work within the local and state EMS system to provide care that is safe, and consistent, and to work to improve prehospital care.

a. Prospective

1. To participate in the development of patient care standards.
2. To work with provider agencies and base hospitals to ensure quality training on new and

changing policies, protocols and equipment.

3. To work with base hospitals to provide quality training for EMS personnel, appropriate to their needs.
4. To continuously re-evaluate training and make changes as needed to improve teaching techniques in all training programs.
5. To remain current with changes in both education and EMS.
6. To be an active part of education at the county and state level through participation on committees and by keeping current with regulatory changes.

b. Concurrent

1. Communicate with all members of the EMS community to remain aware of their changing educational needs.

c. Retrospective

1. To evaluate students through traditional methods of testing, both written and skills.
2. To provide timely feedback to the students on their progress.
3. To evaluate students as they progress through the hospital and field areas by good communication with participating agencies.
4. To assist the EMS QI system in its efforts to undertake research studies or focused audit activities.
5. To allow open lines of communication with agencies and hospitals to be aware of strengths and weaknesses of graduating students.

SUBJECT: EMS MEDICAL DIRECTOR'S ADVISORY COMMITTEE **Date: 07/01/03**
(Base Station Physicians' Committee)

I. Authority: Health and Safety Code, Division 2.5, Section 1798.

II. Purpose: To designate an advisory committee to provide consultation, medical protocol review, and recommendations regarding prehospital medical care issues to the Medical Director of the San Diego County Emergency Medical Services (EMS) agency.

III. Policy: The San Diego County EMS Medical Director may consult with the San Diego County EMS Medical Director's Advisory Committee on issues concerning prehospital treatment protocols and prehospital medical care delivery in the EMS system.

A. **Membership:** The San Diego County EMS Medical Director's Advisory Committee of the County of San Diego, Division of EMS will have the following members:

a. All Base Hospital Medical Directors

b. One member representing Children's Hospital Emergency Department physician staff

c. One member representing approved paramedic training programs

d. One member representing County Paramedic Agencies Committee (CPAC)

e. One member representing the Base Hospital Nurse Coordinators Committee

f. One member representing the San Diego County Paramedics' Association

g. All prehospital agency physician Medical Directors

h. San Diego County EMS Medical Director or designee

i. EMS Prehospital Coordinator

B. The responsibilities of the San Diego County EMS Medical Director's Advisory Committee are:

1. To meet as an Advisory Committee on a monthly basis.

2. To develop an agenda in conjunction with the San Diego County EMS Medical Director.

3. To consult on prehospital medical issues.

Approved:

Steven Jones

Administration

EMS Medical Director

4. To convene small task forces of Advisory Committee members and others to work with the San Diego County EMS Medical Director or designee on specific medical management issues.
5. To consult with other medical specialties, or other advisory bodies in the County, as necessary.
6. To evaluate written statement(s) from Base Hospital Medical Director(s) questioning the medical effect of an EMS policy.

Approved:

Administration **EMS Medical Director**

SUBJECT: PREHOSPITAL AUDIT COMMITTEE **Date: 7/1/01**

I. Authority: Division 2.5, Health and Safety Code, Sections 1797.204 and 1798; also Evidence Code, Sections 1040 and 1157.7.

II. Purpose:

1. To establish an advisory committee to the local Emergency Medical Services (EMS) Agency to monitor, evaluate and report on the quality of prehospital medical care.
2. To promote Countywide standardization of the quality improvement process with emphasis on the educational aspect.
3. To review issues and matters of a system wide nature. It shall not be the function of this committee to become directly involved in the disciplinary action of any specific individual. The authority for actual disciplinary action rests with the County EMS Medical Director and/or the State EMS Authority in accordance with Health and Safety Code, Division 2.5, Section 1798.200.

III. Policy:

A. Scope of Review:

The scope of review to be conducted by the committee may include any patient encountered in the prehospital system in the County of San Diego. The review will include, but not be limited to:

1. Issues reported to the County (refer to P-409 of San Diego County Division of Emergency Medical Services Policy/Procedure/Protocol).
2. Variations from Protocols.
3. Deviations from Scope of Practice.
4. Medication errors.
5. Intubation complications.
6. Variations from standards of care.
7. Unusual cases or cases with education potential.

Approved:

Steven Jones
Administration

M.D. [illegible]
EMS Medical Director

B. Membership:

Members will be designated according to the following format and changes in elected/appointed members will take place at the end of the odd calendar year.

1. The Base Hospital Medical Director of each of the County's Base Hospitals.
2. The Base Hospital Nurse Coordinator of each of the County's Base Hospitals.
3. The Medical Director of the Emergency Department at Children's Hospital and Health Center.
4. The prehospital nurse liaison of the Emergency Department at Children=s Hospital and Health Center.
5. The Medical Director of each of the County's approved advanced life support (ALS) agencies.
6. One medical EMS liaison military representative.
7. The Program Director of each of the County's approved EMT-Paramedic training programs.
8. One current paramedic provider agency representative appointed by CPAC.
9. One City of San Diego ALS transporting agency representative.
10. Two paramedics (one public and one private provider) appointed by San Diego County Paramedic Association.
11. One EMT-I.
12. One first responder representative.
13. One emergency medicine resident from each training program (non-voting).
14. County staff.
15. One Trauma Hospital Medical Director representing the Medical Audit Committee (MAC) on Trauma.

C. Attendance:

1. Members will notify the Chairperson of the committee in advance of any scheduled meeting they will be unable to attend.
2. Resignation from the committee may be submitted, in writing, to the EMS Medical Director, and is effective

upon receipt, unless otherwise specified.

3. At the discretion of the PAC Chairperson and/or County EMS, other invitees may participate in the medical audit review of cases where their expertise is essential to make appropriate determinations. These invitees may include, but are not limited to the following:

   - paramedic agencies representatives
   - law enforcement
   - EMT provider
   - paramedics
   - MICN's
   - physicians
   - communication/dispatch representatives

D. Election of Officers:

Committee officers shall consist of two co-chairpersons one of which is a physician. Elections will take place during the last meeting of each calendar year and appointees shall assume office at the first meeting of the new calendar year. Officers elected shall serve a one year term, and may be re-elected.

E. Voting:

Due to the "advisory" nature of the committee, many issues will require input rather than a vote process. Vote process issues will be identified as such by the Chairperson. When voting is required, a "simple" majority of the voting members of the committee need to be present to constitute a quorum.

F. Meetings:

The committee shall meet on a monthly basis or at a frequency as determined to be appropriate by the Chairperson, but never less frequently than bimonthly.

Approved:

Administration **EMS Medical Director**

G. Minutes:

Minutes will be kept by the EMS Secretary or designee and distributed to the members at each meeting. Due to the confidentiality of the committee, documents will be collected by the EMS staff at the close of each meeting and no copies may be made or processed by members of the committee.

H. Confidentiality:

1. All proceedings, documents and discussions of the Prehospital Audit Committee are confidential and are covered under Sections 1040, 1157.5 and 1157.7 of the Evidence Code of the State of California. The prohibition relating to the discovery of testimony provided to the committee shall be applicable to all proceedings and records of this committee, which is one established by a local government agency as a professional standards review organization which is organized in a manner which makes available professional competence to monitor, evaluate and report on the necessity, quality and level of specialty health services, including but not limited to prehospital care services. Guests may be invited to discuss specific cases and issues in order to assist the committee in making final case or issue determinations. Guests may only be present for the portions of the meeting about which they have been requested to review or testify.

2. All members shall sign a confidentiality agreement not to divulge or discuss information that would have been obtained solely through Prehospital Audit Committee membership. Prior to the invited guests participating in the meeting, the Chairperson is responsible for explaining, and obtaining, a signed confidentiality agreement for invited guest(s).

Approved:

Steven Jones
Administration

M. L. Adams
EMS Medical Director

SUBJECT: TRANSFER AGREEMENTS **Date: 07/01/04**

I. **Authority**: California Health & Safety Code Section 1798.172.

II. **Purpose:** To ensure that all patients requesting emergency services from hospitals in San Diego County receive such evaluation and care as may be required. Furthermore, that all interfacility transfers of patients are accomplished with due consideration for the patients' health and safety.

III. **Policy:**

A. All acute care hospitals in San Diego County with basic or comprehensive emergency departments shall comply with all applicable statutes and regulations regarding the medical screening, examination, evaluation, and transfer of patients that present to that hospital's emergency department.

B. All acute care hospitals shall comply with all applicable statutes and regulations regarding implementation of agreements to ensure that patients with an emergency medical condition who present at that facility, and that facility is unable to accommodate that patient's specific condition, are transferred to a facility with capabilities specific to that patient's need.

1. Hospitals shall develop the mechanisms or agreements necessary to ensure that patients requiring specialty services are appropriately transferred when that hospital is unable to provide that specialty service.
2. Hospitals shall ensure the appropriateness and safety of patients during transfers by implementing policies and protocols which address the following:

a. Type of patient.

b. Initial patient care treatment.

c. Requirements and standards for interhospital care.

d. Logistics for transfer, evaluation, and monitoring the patient.

Approved:

Administration **Medical Director**

SUBJECT: INTERFACILITY TRANSFERS LEVEL OF CARE **Date: 07/01/02**

I. Authority: California Health & Safety Code 1798.172.

II. Purpose: To provide guidelines for ambulance transport of patients between acute care hospitals.

III. Policy:

A. A patient whose emergency medical condition has not been stabilized should not be transferred from a hospital which is capable of providing the required care.

B. Unstable patients shall be transferred only when the reason for the transfer is to medically facilitate the patient's care. The transport of unstable patients must have the concurrence of both the transferring and receiving physicians that the transfer is appropriate.

C. It is the responsibility of the transferring physician, in consultation with the receiving physician, to determine the appropriate mode of transportation and the appropriate medical personnel (EMT-I, EMT-P, RN, Physician, etc.) to provide care during transport.

D. Medical personnel providing interfacility transport shall have the capabilities and skills reasonably necessary to provide for the specific needs of the patient during the transport.

E. Prehospital personnel involved in the interfacility transportation of patients shall adhere to pertinent County and State policies, procedures and protocols pertaining to the scope of practice of prehospital personnel.

F. Hospitals with basic or comprehensive emergency departments shall comply with all applicable statutes and regulations regarding the medical screening examination, evaluation, and transfer of patients that present to that hospital's emergency department.

G. The levels of ambulance services available for the interfacility transport of patients include:

1. Basic Life Support Ambulance

a. The ambulance is staffed with at least two Emergency Medical Technician-I's.

Approved:

Steven Jones
Administration

M.D. [illegible]
EMS Medical Director

b. The patient is anticipated to require no more than basic life support skills during the transport.

c. Patient care may not exceed the EMT-I Scope of Practice.

d. The patient must be considered "stable" prior to the transport.

e. If the patient's condition deteriorates during the transport, the ambulance shall immediately proceed to the closest facility with a licensed emergency department.

2. Critical Care Transport - (including air medical ambulances)

a. The ambulance is staffed with clinical personnel (R.N., Respiratory Therapist, Physician, etc.) appropriate to the requirements of the patient as determined by the transferring physician in consultation with the receiving physician.

b. Unstable patients and those requiring clinical skills beyond those of EMT-I's shall be transported via critical care transport.

c. When nursing personnel are utilized during the transport, written orders from the transferring physician or other responsible physician covering medical and nursing activities shall accompany the patient.

3. EMT-Paramedic Ambulance

a. EMT-Paramedic/9-1-1 system personnel may be used to transport patients ONLY as a last resort when alternative forms of transportation are unavailable, or when the delay in obtaining alternative transport would pose an imminent threat to the patient's health and safety.

b. Hospital personnel accessing the emergency medical services (EMS) system for such transports shall note that, by accessing the EMS system, they may seriously deplete the

EMS resources of their local community.

c. In such situations, EMT-Paramedic/9-1-1 system personnel shall be given as thorough and complete a patient report as is possible by sending hospital staff, and will transport the patient IMMEDIATELY.

d. Paramedics/9-1-1 system personnel should NOT wait at the sending hospital for the completion of medical procedures or the copying of medical records, x-rays, etc. In general, they will not be expected to wait longer than 10 minutes while a patient is being prepared for transport by the sending facility. After 10 minutes, they may notify their dispatcher and may return to service.

e. Interfacility transfers utilizing EMT-Paramedic personnel shall remain under Base Hospital (not sending hospital) medical direction and control. EMT-Paramedics will operate within their scope of practice and in accordance with all other County policies and procedures during interfacility transfers.

f. The Prehospital Audit Committee (PAC) will review significant events and/or trends when EMT-Paramedic/9-1-1 system personnel have been utilized for interfacility transfers to ensure that 9-1-1 system personnel are being utilized appropriately. Issues identified by PAC will be referred to the EMS Division for further action.

Approved:

Steven Jones
Administration

M.L. McCormick
EMS Medical Director

SUBJECT: GUIDELINES FOR THE PREVENTION OF INFECTIOUS AND COMMUNICABLE DISEASES **Date: 07/01/02**

I. Authority: California Health & Safety Code Chapter 3, Article 5, Section 1797.186, 1797.188 and 1797.189.

II. Purpose: To reduce the risk of exposure to infectious and communicable diseases to prehospital personnel and to patients.

III. Policy:

A. All prehospital agencies (including first responder agencies, EMT-1 provider agencies, EMT-P provider agencies, EMT-1 and EMT-P training agencies, Base Hospitals, and aeromedical providers) shall develop and implement comprehensive policies and procedures that are in compliance with the guidelines and requirements outlined by the Centers for Disease Control and the California Occupational Safety & Health Administration regarding "universal precautions" and the protection of personnel and patients from exposure to blood borne and other infectious diseases.

B. Prehospital provider agencies shall develop and implement policies regarding the prompt reporting and follow-up of accidental exposures to infectious diseases by appropriate medical personnel.

Approved:

Administration **EMS Medical Director**

SUBJECT: GUIDELINES FOR HOSPITALS REQUESTING AMBULANCE DIVERSION **Date: 07/01/02**

I. **Authority:** California Health and Safety Code, Division 2.5, Section 1797.222 and California Code of Regulations, Title 13, Section 1105c: "In the absence of decisive factors to the contrary, ambulance drivers shall transport emergency patients to the most accessible emergency facility equipped, staffed, and prepared to administer care appropriate to the needs of the patient."

II. **Purpose:**

A. To transport emergency patients to the most accessible medical facility which is staffed, equipped, and prepared to administer emergency care appropriate to the needs and requests of the patient.

B. To provide a mechanism for a receiving hospital to request diversion of patients from its emergency department when it has been determined that the hospital is not staffed, equipped, and/or prepared to care for additional patients.

III. **Policy:**

A. Diversion Categories

It shall be the responsibility of the satellite hospitals to keep their Base Hospital(s) informed of their status. Satellite hospitals may request diversion, however, the final destination decision shall be made by the Base Hospital MICN/BHMD after consideration of all pertinent factors (i.e. status of area hospitals, ETA's, patient acuity and condition). A hospital may request diversion for the following reasons:

1. **Emergency Department Saturation** – Hospital's emergency department resources are fully committed and are not available for additional incoming ambulance patients.

2. **Neuro/CT Scan Unavailability** - Hospital is unable to provide appropriate care due to non-functioning CT-Scan and/or unavailability of a neurosurgeon. (Only for patients exhibiting possible neurological problems.)

Approved:

Administration **EMS Medical Director**

3. **Internal Disaster** – Hospital cannot receive any patients because of a physical plant breakdown (e.g. fire, bomb threat, power outage, etc.)

B. In the event of anticipated prolonged diversion, notification shall be made to the County of San Diego, Division of Emergency Medical Services.

C. Units dispatched as BLS and/or downgraded to BLS will contact the anticipated patient destination. If that destination is unable to accept patients due to diversion status, the transporting crew will contact the a Base Hospital to determine destination and to relay patient information.

D. Base Hospital direction of Mobile Intensive Care Units (MICU's).

1. Base Hospitals will attempt to honor diversion requests provided that:

   a. The involved MICU estimates that it can reach an "alternate" facility within a reasonable time.

   b. Patients are not perceived as exhibiting uncontrollable life threatening problems in the field (e.g. unmanageable airway, uncontrolled non-traumatic hemorrhage, or non-traumatic full arrest) or any other condition that warrants immediate physician intervention. (Patients meeting trauma criteria shall be transported according to Trauma Policies Protocols and Policy (See S-139 B, S-169, T460**)**.

2. If all area receiving hospitals are "requesting diversions" due to emergency department saturation, the "diversion request~~s~~" status may not be honored and the patient will be transported to the most accessible emergency medical facility within that area. Reasonable consideration should be given to limit transport time to no greater than 20 minutes.

Approved:

Administration **EMS Medical Director**

3. MICN's and prehospital personnel will make best efforts to ensure ambulance patients will be transported to their (patient/family) requested facility.

4. Any exceptions from this policy will be made by Base Hospital Physician Order only.

E. Health and Human Services Agency, Division of Emergency Medical Services staff and/or designee may monitor and/or perform unannounced site visits to hospitals to ensure compliance with these guidelines.

F. Issues of noncompliance should be reported to the Division of Emergency Medical Services.

Approved:

Administration **EMS Medical Director**

SUBJECT: PREHOSPITAL EMERGENCY MEDICAL CARE SERVICES CERTIFICATED PERSONNEL AFFECTED BY LOCAL EMS DISCIPLINARY ACTION

I. Authority: Health and Safety Code, Division 2.5, Section 1798.200 and 1798.204.

II. Purpose: To identify the prehospital Emergency Medical Services Personnel certified under provisions of Division 2.5 who are subject to local EMS Disciplinary Actions, and the grounds for such action.

III. Policy:

A. The classification of prehospital emergency medical services personnel certified under provisions of the California Code of Regulations, Title 22, Division 9, Chapter 6 include:

1. Emergency Medical Technician-Basic (EMT-B).
2. Emergency Medical Technician-II (EMT-II).
3. Emergency Medical Technician–Paramedic.

B. Negative certification actions taken under the above provisions are limited to consideration of the prehospital emergency care certificate(s) held, or applied for, pursuant to Division 2.5 of the Health and Safety Code and do not apply to any other license or certification which is not subject to the provisions of Division 2.5.

C. If the disciplinary action is taken against the prehospital care certificate of a person who holds a related certificate or license, the agency, which issued that other certificate or license, should be notified in writing of the disciplinary action taken and the reasons for that action.

D. The EMS Medical Director for the County of San Diego may take appropriate action according to these policies and procedures, against the certificate of any prehospital emergency care person certified pursuant to Division 2.5 of the Health and Safety Code, for which any of the following conditions is true:

1. The certificate was issued by the EMS Medical Director; or
2. The certificate holder utilizes or has utilized the certificate or the skills authorized by the certificate within the County of San Diego.

Approved:

Administration **Medical Director**

E. If the EMS Medical Director initiates an investigation of, or takes action which affects a prehospital emergency medical care certificate, which either was issued by another certifying authority or was issued to a certificate holder who utilized the prehospital skills authorized by the certificate within the jurisdiction of another local EMS Agency, the certifying authority and/or the other local EMS Agency shall be notified in writing of the initiation of the investigation, the findings of the investigation, and any action taken as a result of the investigation.

F. Disciplinary proceedings against a multiple certificate holder may apply to one certificate, or more than one, at the discretion of the EMS Medical Director, according to the circumstances of the case.

G. An evaluation and determination by the EMS Medical Director that any of the following actions have occurred constitutes evidence of a threat to the public health and safety and is cause for initiating a formal investigation and possible disciplinary action:

1. Fraud in the procurement of any certification issued under Part 1 of Division 2.5 of the Health and Safety Code.
2. Gross negligence.
3. Repeated negligent acts.
4. Incompetence.
5. The commission of any fraudulent, dishonest or corrupt act, which is substantially related to the qualifications, functions, and duties of prehospital personnel.
6. Conviction of any crime, which is substantially related to the qualifications, functions and duties of prehospital personnel. The record of conviction or certified copy thereof shall be conclusive evidence of such conviction.
7. Violating or attempting to violate directly or indirectly, or assisting or abetting the violation of, or conspiring to violate any provision of Part 1 of Division 2.5 of the Health and Safety Code or of

the regulations adopted by the Authority pertaining to prehospital personnel.

8. Violating or attempting to violate any Federal or State statute or regulation, which regulates narcotics, dangerous drugs or controlled substances.

9. Addiction to the excessive use of, or the misuse of alcoholic beverages, narcotics, dangerous drugs or controlled substances.

10. Functioning outside of the supervision of medical control in the field care system operating at the local level, except as authorized by any other license or certification.

11. Demonstration of irrational behavior or occurrence of physical disability to the extent that a reasonable and prudent person would have reasonable cause to believe that the ability to perform the duties normally expected may be impaired.

12. Unprofessional Conduct Exhibited by any of the following:

    a. The mistreatment or physical abuse of any patient resulting from force in excess of what a reasonable and prudent person trained and acting in a similar capacity while engaged in the performance of his or her duties would use if confronted with a similar circumstance.

    b. The failure to maintain confidentiality of patient medical information, except as disclosure is otherwise permitted or required by law in Sections 56-56.6, inclusive of the Civil Code.

    c. The commission of any sexually related offense specified under Section 290 of the Penal Code.

H. Proceedings for probation, suspension, revocation or denial of a certificate or a denial of a renewal of a certificate, under this division shall be conducted in accordance with the guidelines established by the Emergency Medical Services Authority.

Approved:

Administration **Medical Director**

SUBJECT: PREHOSPITAL EMERGENCY MEDICAL CARE INVESTIGATIVE PROCESS

I. Authority: Health and Safety Code, Division 2.5, Sections 1798.200, 1798.201, 1798.202 and 1798.204.

II. Purpose: To provide an equitable and flexible process whereby the EMS Medical Director may, in a timely manner, take disciplinary action as is necessary to maintain medical control of prehospital EMS personnel and protect the public health and safety; while at the same time ensure that the due process rights of the holder of/or applicant for an EMS prehospital certificate are protected.

III. Policy:

A. The EMS Medical Director should take great care during all phases of the disciplinary process to ensure that the due process rights of an individual are protected.

1. Ensure that the individual receives prompt notice of all proceedings of the disciplinary process.
2. Ensure that the individual is informed of his/her right to counsel or other representation during the disciplinary process.

B. Any information regarding the individual which is considered in the disciplinary process shall be available to the individual and/or his/her legal counsel or designated representative for review. The local EMS agency should take adequate precaution to ensure that the information which would violate another person's legal right to confidentiality is not published.

IV. Procedure:

A. All allegation(s) regarding the performance of EMT-B or Paramedic shall be submitted to the EMS Medical Director, Health and Human Services Agency, Division of Emergency Medical Services, in writing. Such written complaint(s)/allegation(s) should include:

1. The date and time of the occurrence, or as closely approximated as possible.
2. The nature of the occurrence or concern.
3. The names of witnesses or persons who can corroborate the facts.
4. A factual statement describing exactly what transpired.

B. The EMS Medical Director, or designee, shall review and evaluate the information relative to the potential

threat to the public health and safety and determine action warranted.

C. If the EMS Medical Director determines there is reason to believe that disciplinary action may be necessary against a Paramedic, all documentary evidence collected shall be forwarded to the Director of the EMS Authority with a recommendation for further investigation or discipline of the licenseholder. The recommendation and accompanying evidence shall be deemed in the nature of an investigative communication and protected by Section 6254 of the Government Code.

1. The EMS Medical Director may temporarily suspend, prior to hearing, after consultation with the relevant employer, any EMT-Paramedic license upon a determination that:
   a. The licensee has engaged in acts or omissions that constitute grounds for revocation of the license; and,
   b. Permitting the licensee to continue to engage in the licensed activity would present an imminent threat to public health or safety.
2. The local EMS agency shall notify the licensee that his/her paramedic license is suspended and shall identify the reason(s) for the suspension.
3. Within three (3) working days of the initiation of the suspension, the local EMS agency shall transmit to the authority, via fax or overnight mail, all documentary evidence collected relative to the decision to temporarily suspend.

D. If the EMS Medical Director determines there is reason to believe that disciplinary action may be necessary against an EMT-Basic, a formal investigation shall be initiated.

1. The EMT-Basic certificate holder and his/her relevant employer(s) shall be notified in writing, by registered mail, of the investigation. The written notice to the certificate holder and his/her relevant employer(s) shall include:
   a. A statement of the allegation(s) against the certificate holder.
   b. A statement that explains the allegation(s), if found to be true, constitutes a threat to public health

and safety, and is/are cause for the EMS Medical Director to take action pursuant to Section 1798.200 of the Health and Safety Code.

c. An explanation of the possible actions, which may be taken if the allegations are found to be true.

d. A date by which the information must be submitted.

e. A request for a written response to the allegation(s) from the certificate holder.

f. A statement that the certificate holder may submit in writing any information that she/he feels is pertinent to the investigation, including statements from other individuals, etc.

g. An explanation of the investigative review panel (IRP) process, if suspension, revocation, denial or denial of renewal of a certificate may occur.

2. The certificate holder and relevant employer(s) shall be allowed to submit pertinent information, in writing, to the EMS Medical Director.

3. The certificate holder and his/her employer shall be allowed a maximum of five (5) working days to respond to the request for information, unless extenuating circumstances preclude response within that time and the EMS Medical Director determines that an extension of the response time would not jeopardize the public health and safety.

4. The EMS Medical Director or designee shall designate a person or persons to assure that any and all relevant information pertaining to the allegation(s) and to the performance of the certificate holder in regard to the use of prehospital emergency medical skills is gathered.

5. Determination of Appropriate Action:

a. The EMS Medical Director shall determine what action, relative to the individual's certificate(s) if any, should be taken as a result of the findings of the investigation.

b. The nature of the disciplinary action should be proportionate to and related to the severity of the risk to the public health and safety caused by the actions of the holder of, or applicant for, a prehospital EMS certificate.

c. Upon determining the action to be taken relative to a individual's certificate, the EMS Medical Director shall complete and place in the record, a statement certifying the decision made by the Medical Director and the date the decision was made. The statement shall include the signature of the EMS Medical Director, the date the decision was made, and the location where signed.

d. The types of action which could be taken include the following:

(1) No disciplinary action: if the allegation(s) are found to be untrue, unsubstantiated or unrelated to the ability of the certificate holder to perform his/her duties as a prehospital EMS provider, the EMS Medical Director should take no disciplinary action.

(2) Documentation/Monitoring: If substantiation of the allegation(s) is insufficient to justify disciplinary action, but evidence is available which indicates that the allegation(s) may be well founded, the EMS Medical Director may decide to have the behavior of the certificate holder in the field monitored to provide further documentation. If this is done the certificate holder shall be informed that his/her conduct in the field will be monitored for a specified period of time, which will be set by the EMS Medical Director. Monitoring may include, but not be limited to concurrent audits by a designee of the EMS Medical Director, such as the certificate holder's employer or medical supervisor.

(3) Counseling: If the EMS Medical Director determines that the infraction or performance deficiency is minor and the EMS Medical Director thinks that the certificate holder's conduct can be improved by counseling, she/he may choose to have the certificate holder counseled. The counseling session(s) shall include:

(a) A review of the findings of the investigation.

(b) Specific issues of concern.

(c) Improvements expected of the certificate holder, and time frame in which they shall be demonstrated.

(d) Manner(s) in which such improvement may be achieved.

(e) The evaluation method that will be used to assess the certificate holder's improvement.

(f) The EMS Medical Director may designate another person, such as the certificate holder's employer or medical supervisor to provide the specified counseling.

(4) Reprimand: May be determined by the EMS Medical Director if the facts of the case indicate:

(a) A minor infraction that is unlikely to reoccur.

(b) Is not representative of the certificate holder's usual behavior; and,

(c) Is not likely to continue to jeopardize the public health and safety.

(5) Probation: Shall be determined appropriate by the EMS Medical Director if the seriousness of the infraction or performance deficiency indicates a need to monitor the individual's conduct.

(a) The term of the probation will be for a specific period of time, not to exceed one (1) year.

(b) Probation may be chosen in addition to specific remedial counseling/training.

(c) The individual's performance shall be reviewed periodically during the probationary period.

(6) Suspension: May be determined by the EMS Medical Director if in the professional opinion of the EMS Medical Director, an infraction or performance deficiency indicates a need to temporarily remove the certificate holder from the practice of prehospital emergency medical care to protect public health and safety. Suspension may, but need not be immediately effective.

(a) The certificate holder and his/her relevant employer(s) shall be notified in writing prior to or concurrent with the initiation of suspension.

(b) Suspension of the individual's certificate would be for a specific period of time.

(c) The EMS Medical Director based on the facts of the case shall determine the term of suspension and any conditions for reinstatement, such as satisfactory completion of

remedial training.

(d) If the suspension period will run past the expiration date of the individual's certificate, the EMS Medical Director may, at the end of the suspension period, either allow the individual to renew the certificate by the usual process or require the individual to demonstrate that the individual sufficiently retains the necessary knowledge or skills. If the individual cannot demonstrate sufficient retention of the necessary knowledge or skills, as determined by the EMS Medical Director, the individual might be required either to complete specific retraining requirements or to reapply for the certificate as if the individual was a new applicant.

(e) If the affected individual's certificate is being immediately suspended pursuant to this provision and the facts of the matter have not yet been reviewed by an IRP, the certificate holder may, within fifteen (15) calendar days of the date that written notification of the suspension is received, request, in writing, that a special IRP be convened to review the facts which necessitate an immediate suspension. Upon receipt of such a request, the EMS Medical Director shall convene a special IRP to review the facts, which necessitate an immediate suspension of the individual's certificate prior to completion of the investigatory process and determination of final action by the EMS Medical Director.

i. The special IRP review of the facts necessitating the immediate suspension shall be completed and the certificate holder notified of the IRP's recommendation and the EMS Medical Director's decision regarding continuation of the suspension, within twenty-one (21) calendar days of receipt of the request for the special IRP.

ii. The EMS Medical Director shall present evidence for review by the special IRP that he feels, in his expert opinion, demonstrates the necessity for the immediate

suspension of the affected individual's certificate prior to completion of the investigatory process. The EMS Medical Director need not present all of the information gathered at that point in the investigation if he feels, in his professional opinion that disclosure at that time of other information gathered could jeopardize completion of the investigation or of a related investigation, except that any information which contradicts the need for the immediate suspension may not be withheld.

iii. The EMS Medical Director need not complete a special IRP review of the facts necessitating the immediate suspension if a full IRP review of all the facts of the case can be completed, and the certificate holder notified of the final decision of the EMS Medical Director within twenty-one (21) calendar days after request for the special IRP is received.

(7) Revocation, Denial or Denial of Renewal: If the infraction or performance deficiency is such that it is likely that the holder of, or applicant for, a certificate should not practice because of the risk to public health and safety, the EMS Medical Director may revoke, deny or deny the renewal of a certificate.

f. The EMS Medical Director may refuse to accept or process an application for a prehospital emergency medical care certificate from any person whose prehospital emergency medical care certificate or authorization has been revoked, denied, or the renewal denied for any of the reasons listed in Section 1798.200 of Division 2.5, unless the person submits documentation which, in the opinion of the EMS Medical Director, demonstrates that the threat to the public health and safety, which necessitated the denial or revocation, is no longer applicable.

g. If the EMS Medical Director determines that the infraction or performance deficiency is of a minor nature relative to the potential threat to the public health and safety, the EMS Medical Director

may institute disciplinary action without calling a review panel. If so, notice from the EMS Medical Director shall inform the individual that he may request an IRP review, as described herein.

h. If the EMS Medical Director determines that the infraction or performance deficiency may require the suspension, revocation, denial of renewal of a certificate, the EMS Medical Director may convene an IRP to assist in establishing the facts and report its findings.

(1) The IRP shall consist of at least three (3) persons knowledgeable in the provision of prehospital emergency care and local EMS System policies and procedures. One (1) member of the IRP shall be mutually agreed upon by the certificate holder and the EMS Medical Director, if the certificate holder so requests. The IRP shall not include the EMS Medical Director, any local EMS Staff, or anyone who submitted allegations against the certificate holder or who was directly involved in any incident which is included in the investigation.

(2) Within three (3) days of the selection of the IRP, the individual and the individual's employer shall be notified by registered mail of the purpose of the IRP, its membership, and the certificate holder's right to approve one member, the date and time that it will convene and the certificate holder's right to designate another person to accompany him/her to the IRP to provide him/her with advice and support. Both the subject and the EMS Medical Director shall mutually agree upon, any change in the time or date of convening the IRP in writing.

(3) The IRP shall assess all the available information on the matter in order to establish the facts of the case. The certificate holder shall be given the opportunity to be present during the presentation of any testimony before the IRP, allowed to be accompanied by legal counsel or another representative of his/her choosing to provide him/her with advice and support, allowed to testify before the IRP, allowed to call his/her own witnesses and allowed to

question witnesses called by the EMS Medical Director.

(4) The IRP shall make a written report of its findings and its recommendation to the EMS Medical Director (by the date specified by the EMS Medical Director).

(5) The IRP review shall be completed, the findings of the IRP reported to the EMS Medical Director and the certificate holder notified of the IRP's recommendations and the EMS Medical Director's final decision within forty-five (45) calendar days of receipt of the request .for the IRP.

E. Notification of the certificate holder and his/her relevant employer of the action prescribed by the EMS Medical Director shall take place in writing within ten (10) calendar days after making the final determination and shall include the following information:

1. The specific allegation(s), which resulted in the investigation.
2. A summary of the findings of the investigation, including the findings and recommendations of the IRP, if one was convened;
3. The action(s) to be taken, the effective date and the duration of the action(s) including counseling, probation or suspension.
4. Which certificate(s) the action applies to in cases of multiple certificate holders.
5. If no IRP was convened, and the individual's certificate has been suspended, revoked, denied or the renewal denied, an explanation of the individual's rights to request an IRP review of the action including, if the individual certificate has been suspended, the right to request a special IRP to review the facts, which necessitated the immediate suspension.
6. A statement that the certificate holder must report the action to any other local EMS agencies in whose jurisdiction she/he uses the certificate; and,
7. If the certificate holder has been placed on probation, a statement that, during the probationary period, the certificate holder must report the probation if she/he applies for certification or authorization from

another local EMS agency;

8. If the certificate has been suspended, a statement that the certificate holder must report that suspension if she/he applies for any certification or authorization from another local agency during the period of suspension; or

9. If the certificate has been revoked, denied, or the renewal denied, a statement that she/he must report that action if she/he applies for any certification or authorization from another local EMS agency, and that his/her application may not be accepted or processed unless she/he presents documentation which, in the opinion of the Medical Director of the local EMS agency, demonstrates that the threat to public health and safety which necessitated the denial or revocation is no longer applicable.

Approved:

Administration **Medical Director**

SUBJECT: GUIDELINES FOR VERIFICATION OF ORGAN DONOR STATUS **Date: 7/01/01**

I. Authority: Health & Safety Code, Section 7152.5(b).

II. Purpose: To establish guidelines for emergency medical services (EMS) field personnel to meet requirements that they search for an organ donor document of gift or other information on adult patients for whom death appears imminent.

III. Definitions:

A. Reasonable Search: A brief attempt by EMS field personnel to locate an organ donor document of gift or other information that may identify a patient as a potential organ donor, or one who has refused to make an anatomical gift. This search shall be limited to a wallet or purse that is on or near the individual, to locate a driver's license or other identification card with this information.

B. Imminent Death: A condition wherein illness or injuries are of such severity that in the opinion of EMS personnel, death is likely to occur before the patient arrives at the receiving hospital. For purposes of this policy, this definition does not include any conscious patient regardless of the severity of illness or injury.

IV. Policy:

A. When EMS field personnel encounter an unconscious adult patient for whom it appears death is imminent (that is, death prior to the arrival of the patient at a receiving facility), they shall attempt a "reasonable search" of the patient's belongings to determine if the individual carries an organ donor document of gift or other information indicating the patient's status as an organ donor.

B. Treatment and transport of the patient remains the highest priority for field personnel. This search shall not interfere with patient care or transport.

C. Field personnel shall notify the receiving hospital personnel if organ donor document of gift or other information is discovered. Advanced life support units shall notify their base hospital in addition to the receiving hospital personnel.

Approved:

Steven Jones
Administration

M.L. Cohen MD
EMS Medical Director

D. Any organ donor document of gift or other information that is discovered shall be transported to the receiving hospital with the patient, unless it is requested by an investigating law enforcement officer. In the event that no transport is made, any organ document of gift or other information shall remain with the patient.

E. Field personnel shall briefly note the results of the search on the EMS Prehospital Patient Record.

F. No search is to be made by EMS personnel after the patient has expired.

G. If a member of the patient's immediate family objects to the search for an organ donor document of gift or other information at the scene, their response to a question about the patient's organ donation wishes shall be considered to satisfy the requirement.

Approved:

Steven Jones
Administration

M.L. McCann MD
EMS Medical Director

I. **Authority:** Division 2.5, Health and Safety Code, Sections 1797.204 and 1798; and Evidence Code, Sections 1040 and 1157.7.

II. **Purpose:** To establish the scope, membership and functions of an advisory committee to the local Emergency Medical Services (EMS) agency. This committee shall meet to monitor and evaluate the medical care of identified patients with traumatic injury.

III. **Policy**

A. The scope of the committee shall include, but not be limited to:

1. Review of trauma deaths in the County
2. Evaluation of trauma care
3. Provision of input to the local EMS agency in the development, implementation and evaluation of medical audit criteria
4. Design and monitoring of corrective action plans for trauma medical care
5. Assistance and participation in research projects
6. Provision of medical care consultation at the request of the County of San Diego Division of EMS (County EMS), including on-site facilities evaluation by committee members
7. Establishment of subcommittees of outside consultants at the request of County EMS
8. Recommendation of process improvement strategies related to trauma care

B. Membership:

The committee shall be comprised of the following:

1. Members:
   a. Trauma Center Medical Directors from all designated centers

Approved:

Administrator **Medical Director**

b. Trauma Nurse Coordinators from all designated Trauma Centers

c. County EMS Trauma System Coordinator/Trauma Quality Assurance Specialist

d. County Trauma System Surgical Consultant

e. Base Hospital Physician representing the Prehospital Audit Committee (PAC)

f. Neurosurgeon appointed by the Academy of Neurosurgeons

g. Anesthesiologist appointed by the Anesthesia Association

h. Orthopedic Surgeon

i. Emergency Physician not affiliated with a trauma center, appointed by San Diego Emergency Physicians Society

j. County EMS Medical Director

2. Ad Hoc Members that may participate:

a. Trauma Base Hospital Medical Directors

b. Medical Director Air Medical Services

c. Designated Assistant Trauma Medical Directors or Trauma Surgeon staff of trauma centers

d. Approved physicians enrolled in Trauma fellowships

e. Trauma Center Intensivists

f. Assistant Trauma Coordinators

g. Physicians from non-trauma facilities who are presenting cases

h. President of the Medical Society

Approved:

Administrator **Medical Director**

i. General surgeon appointed by the Society of General Surgeons

j. County EMS Administrator/appropriate Division staff

k. Managed care physician representative appointed by County EMS.

C. Attendance:

1. Members should notify County EMS staff (285-6429) in advance of any scheduled meeting they would be unable to attend. Attendance at these meetings for the Trauma Medical Directors and Trauma Nurse Coordinators or their designees is mandatory. The Trauma Medical Directors and the Trauma Nurse Coordinators should use their best efforts to attend 90% of the scheduled MAC meetings annually. After three (3) consecutive absences in a calendar year, an appointed member may be replaced on the Committee.

2. Resignations from the committee shall be submitted, in writing to County EMS.

3. Invitees may participate in the medical review of specified cases where their expertise is requested. All requests for invitees must be approved by County EMS in advance of the scheduled meeting.

4. Invitees not participating in the medical review of specified cases must be approved by County EMS and all Trauma Medical Directors.

D. Voting:

Due to the "advisory" nature of the committee, many issues require consensus rather than a vote process. Vote process issues will be identified

as such by the Chairperson. When voting is required, the majority of the voting members of the committee need to be present. Voting members may include Trauma Medical Directors, Trauma Nurse Coordinators and the appropriate physician specialist. Members may not participate in voting when a conflict of interest exists.

E. Meetings:

The committee shall meet at least six (6) times per year at times arranged by County EMS/MAC.

F. Committee Documentation:

Minutes will be kept by County EMS staff and distributed to the members at each meeting. Due to the confidentiality of the committee, confidential committee documents will be collected by County EMS staff at the close of each meeting and no copies may be made or possessed by members of the Committee. All official correspondence and communication generated by the Medical Audit Committee will be approved by County EMS staff and sent on San Diego County letterhead.

Approved:

Steven Jones
Administrator

Medical Director

G. Confidentiality:

All proceedings, documents and discussions of the Medical Audit Committee are confidential and are covered under Sections 1040 of the Government Code and 1157.7 of the Evidence Code of the State of California. The prohibition relating to discovery of testimony provided to the Committee shall be applicable to all proceedings and records of this Committee, which is one established by a local government agency to monitor, evaluate and report on the necessity, quality and level of specialty health services, including, but not limited to, trauma care services. Issues which require prehospital medical/system input may be sent to the confidential Prehospital Audit Committee.

Approved:

Steven Jones
Administrator

Medical Director

SUBJECT: PATIENT INFORMATION/CONFIDENTIALITY **Date: 07/01/04**

I. Authority: Confidentiality of Medical Information Act (Civil Code, Section 56 et. seq.) Title 22, Division 9, Sections 100075, 100159, Health Insurance Portability and Accountability Act. (HIPAA).

II. Purpose: To describe the conditions and circumstances by which protected health information may be released.

III. Definitions: Protected Health Information (PHI) – HIPAA regulations define health information as:

"any information, whether oral or recorded in any form or medium" that

- "is created or received by a health care provider, health plan, public health authority, employer, life insurer, school or university, or health care clearinghouse" and,
- "relates to the past, present, or future physical or mental health or condition of an individual; the provision of health care to an individual, or the past, present, or future payment for the provision of health care to an individual."

IV. Policy

A. All prehospital provider agencies shall have policies in place regarding the disclosure of PHI of EMS patients.

B. Prehospital provider agencies shall designate a Public Information Officer (PIO) or other designated person(s) authorized to release operational or general information, as authorized by State and Federal law.

Approved:

Administration	**Medical Director**

C. PHI may not be disclosed by prehospital personnel, except as follows:

1. To other care givers to whom the patient care is turned over, for continuity of patient care (including the prehospital patient record).
2. To the County of San Diego, Base Hospital or provider agency quality improvement program (including the provider agency supervisory personnel).
3. To the patient or legal guardian.
4. To law enforcement officers in the course of their investigation under the following circumstances:
    a. As required by law (e.g. court orders, court-ordered warrants, subpoenas and administrative requests).
    b. To identify or locate a suspect, fugitive, material witness or missing person.
    c. In response to a law enforcement official's request for information about a victim or suspected victim of a crime.
    d. To alert law enforcement of a person's death if the covered entity suspects that criminal activity caused the death.
    e. When a covered entity believes that PHI is evidence of a crime that has occurred on the premises.

Approved:

Administration	**Medical Director**

f. In a medical emergency and it is necessary to inform law enforcement about the commission and nature of a crime, the location of the crime or crime victims, and the perpetrator of the crime.

5. To the provider agency's billing department, as needed for billing purposes.

6. In response to a properly noticed subpoena, court order or other legally authorized disclosure.

C. Any prehospital records (recorded or written), used for training or continuing education purposes, must be edited to remove identifying patient/incident information.

Approved:

Administration **Medical Director**

2. To the County of San Diego Division of Emergency Medical Services, Base Hospital or provider agency quality improvement program (including the agency supervisory personnel).
3. To the patient or legal guardian.
4. To law enforcement officers in the course of their investigation.
5. To the agency's billing department, as needed for billing purposes.
6. In response to a subpoena, or other legally authorized disclosure.

D. Any prehospital records (recorded or written), used for training or continuing education purposes, must be edited to remove identifying patient/incident information.

Approved:

Administration **Medical Director**

SUBJECT: DOWNGRADE OR CLOSURE OF EMERGENCY SERVICES IN A HOSPITAL DESIGNATED AS A BASIC EMERGENCY RECEIVING FACILITY **Date: 07/01/03**

I. **Authority:** Health and Safety Code, Division 2.5, Section 1300.

II. **Purpose:** To identify the procedures instituted prior to closure or downgrade of emergency services provided by a licensed acute care hospital with a permit to provide basic or comprehensive emergency services.

III. A. Hospitals planning to close or downgrade their capacity to provide emergency services shall notify the Division of Emergency Medical Services (EMS) of their intent at least 90 days prior to the scheduled change, in accordance with applicable regulations. This notification shall provide the Division of EMS with the following information:

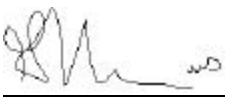
1. Rationale for downgrade or closure.
2. Proposed timeline for downgrade or closure.
3. Annual patient volume seen in the emergency department.
4. Any other services provided by the hospital that may additionally be impacted by the emergency department closure/downgrade.
5. Plans for community notification including the scheduling of mandated public hearings.

B. Upon notification that a hospital intends to close or downgrade the level of emergency services offered pursuant to its permit to operate a basic or comprehensive emergency facility, the San Diego County Division of Emergency Medical Services shall conduct an evaluation of the potential impact to prehospital emergency care providers and upon the remaining emergency care facilities in the geographic area. The impact evaluation and a public hearing shall occur within 60 days of receiving notification of the intent of closure.

This impact evaluation shall include the following:

Approved:

Administration



EMS Medical Director

1. **Geographical Data** regarding facility isolation, service area population density, travel time and distance to next closest facility, number and type of other available emergency services, and availability of prehospital resources.
2. **Base Hospital Designation** information to include the number of calls received, number of patients received, and impact on patients, prehospital personnel and other Base Hospitals.
3. **Trauma Care** impact based on the number of patients received, and impact on remaining hospitals, trauma centers and trauma patients.
4. **Specialty Services Provided** that are not readily available at other community facilities and the next nearest availability of those services such as burn center, neurosurgery, pediatric, critical care, etc.
5. **Patient Volume** on an annual basis including both 9-1-1 transports, transfers and walk-in patients.
6. **Public Notification** of the intended downgrade or closure has occurred with a minimum of one public hearing in addition to advertisement to the community via publications, education sessions or media forums.

C. In addition to performing the impact evaluation, the Division of Emergency Medical Services shall:

1. Notify and consult with all prehospital health care providers and hospitals in the geographical area regarding the potential closure or change.
2. Notify all planning or zoning authorities prior to completing an impact evaluation.
3. Provide, in writing, a copy of the Division's impact evaluation to the California EMS Authority and the California State Department of Health Services within three (3) days of the completion of the impact evaluation.

Approved:

Administration **EMS Medical Director**

SUBJECT: EMS FOR CHILDREN (EMSC) ADVISORY COMMITTEE **Date: 07/19/02**

I. **Authority:** Health and Safety Code, Division 2.5, Section 1798 and 1797.204 and Chapter 12, 1799.

II. **Purpose:** To establish the scope, membership and functions of an advisory committee to the Division of Emergency Medical Services (EMS). This committee will provide consultation, medical protocol review, evaluate and make recommendations regarding medical care, access to care, medical preparedness, community preparedness and illness and injury prevention regarding children to the Medical Director of the Division of Emergency Medical Services (EMS). [1]

III. **Policy:** The EMS Medical Director may consult with the EMSC Advisory Committee on issues concerning pediatric system, protocol, education, medical care delivery, community preparedness and prevention within County of San Diego.

A. Membership: The EMS-C Advisory/Steering Committee will have the following membership:

1. Base Station Physicians' Committee representative;
2. Hospital Administration /Association Representative;
3. One physician member representing Children's Hospital Emergency Dept. physician staff;
4. One physician member representing the Medical Society Emergency Physicians or a Non-Trauma Center, non-Base Hospital Emergency Department physician;
5. One physician member representing AAP or COPEM;
6. One physician member representing U.S. Naval Hospital;
7. One physician member representing private practice pediatrics;
8. One member representing Community Injury Prevention;
9. One member representing approved paramedic training programs;
10. One member representing the San Diego County Paramedic Association;
11. One member representing the Base Hospital Nurse Coordinators Committee;
12. One member representing Children's Hospital Emergency Department nursing staff;
13. One member representing the pediatric Trauma Center; and,
14. One member representing community, i.e. Parents-Teachers Association.

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[1] EMSC Project, Final Report, CA EMSA #196, 1994
EMSC Five Year Plan, Goals & Objectives 2001-5, CA EMSA

Approved:

Administration	**EMS Medical Director**

B. The responsibilities of the EMS-C Advisory Committee are:

1. To develop a system EMS-C plan listing goals, priorities and time line.
2. To convene small task forces of the Advisory Committee and others to work with the EMS Medical Director or designee on specific medical management issues and community initiatives.
3. To consult with other medical specialties, community representatives or other advisory bodies in the County of San Diego, as necessary.
4. To provide steering recommendations for the implementation of EMSC related projects.
5. To develop recommended policy/guidelines/protocols/procedures concerning medical care delivery for children, community preparedness, access to medical care and illness and injury prevention.
6. To develop programs providing public education concerning EMSC and related projects.
7. To participate in the implementation of approved policy/guidelines/programs/ protocols/ procedures concerning access to and medical care delivery for children, community preparedness and illness and injury prevention as requested by EMS.

C. Attendance:

1. Members should notify Division of EMS staff (619-285-6429) in advance of any scheduled meeting they would be unable to attend.
2. An appointed member may be replaced after two consecutive absences.

D. Voting:

1. Due to the "advisory" nature of the committee, many issues require consensus rather than a vote process. The Chairman will identify issues requiring a vote and the vote process.
2. When voting is required, a simple majority of committee members needs to be present. Members may not participate in voting when a conflict of interest exists.

E. Meetings:

The committee shall meet at least four (4) times per year at times arranged by the Division of EMS.

Approved:

Administration **EMS Medical Director**

SUBJECT: TREATMENT PROTOCOL -- INTRODUCTION **Date: 7/1/04**

INTRODUCTION

These Protocols define the basic and advanced life support treatment and disposition standards for San Diego County.

1. These treatments are listed in sequential order for each condition.
   Adherence is recommended.
   All skills follow the criteria in the Skills List.

2. All treatments may be performed by the EMT-B (BLS treatments) and/or paramedic without an order EXCEPT for those stating "Base Hospital Order (BHO)" or "Base Hospital Physician Order (BHPO)".
   All treatments requiring an order are at the discretion of the Base Hospital providing medical direction. Standing orders may be implemented at the discretion of the field EMT-B/paramedic and may be continued following the initial notification.
   Once a complete patient report is initiated:
   - All BH orders supersede any standing orders except defibrillation, precordial thump and intubation.
   - ALL subsequent medication orders MUST be from that Base **(S-415)**.

3. **BHPO (Base Hospital Physician Order)**: BHPOs may be relayed by the MICN.
   Physician must be in direct voice contact for communication with another physician on scene.

4. Abbreviations and definition of terms are attached.

5. All medications ordered are to be administered as described UNLESS there is a contraindication, allergy or change in condition.

6. Cardioversion when listed in the protocols is always synchronized.

7. Personal protective equipment must be used on all patient contacts per provider agency policy (S-009).

8. PEDIATRIC SPECIAL CONSIDERATIONS:
   a. A pediatric patient is defined as appearing to be <15 yo.

   b. Pediatric cardioversion is CONTRAINDICATED whenever the defibrillator unit is unable to deliver <5w/s/kg or equivalent biphasic.

   c. Medications are determined by weight or length, refer to the pediatric drug cart, P-117. Children ≥ 50 kg. receive adult dosages regardless of age.

9. In a multiple patient incident, the paramedic team may split per standing orders.
   Base hospital contact should be made to confirm destination prior to leaving scene or ASAP enroute.
   If the paramedic team is split, each paramedic may still perform ALS duties.

Approved:

EMS Medical Director

RESOURCES AND REFERENCES USED:

Guidelines 2000 for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care: International Consensus on Science, Circulation, 2000; 102 (Suppl I).

Advanced Cardiac Life Support, American Heart Association, Richard O. Cummins, Editor, Dallas, Texas, 2002

Barkin, Roger, Pediatric Emergency Medicine: Concepts and Clinical Practice, CV Mosby, St. Louis, MO, 1992

Broselow Pediatric Emergency Tape, Vital Signs, Inc., 1998.

Erlich, Frank, Heldrich, Fred J, Tepas III, J.J., Pediatric Emergency Medicine, Aspen Publ., MD, 1987

Mosby's Paramedic Textbook, Sanders, McKenna, Mosby Yearbook, St Louis, MO, revised 2nd edition 2002

Nichols, David G., Yaster, Myron, Lappe, Dorothy, Buck, James; Golden Hour: The Handbook of Advanced Pediatric Life Support, Mosby Yearbook, St. Louis, 1991

Pediatric Advanced Life Support, American Heart Association and American Academy of Pediatrics, Mary Fran Hazinski, Editor, Dallas, Texas, 2002.

Pediatric Education for Prehospital Professionals, American Academy of Pediatrics, Jones and Bartlett, MA, 2000.

Pre-Hospital Burn Life Support, American Burn Association, 1994

Approved:

EMS Medical Director

SUBJECT: TREATMENT PROTOCOL -- GLOSSARY OF TERMS **Date: 7/1/04**

GLOSSARY OF TERMS

Apparent Life Threatening Event (ALTE): an episode involving an infant less than 12 months of age which includes one or more of the following:

1) Apnea
2) Color change (cyanosis, pallor)
3) Marked change in muscle tone (limpness or stiffness)
4) Unresponsiveness

Definitive therapy: Administration of a fluid bolus or medications.

End Tidal CO_2 Detection Device: The only disposable end tidal CO_2 detection devices approved for prehospital use in San Diego County are the "Easycap" for patients $\geq$15 kg and "Pedicap" for patient < 15 kg. Non-disposable end tidal CO_2 detection-monitoring devices are optional and may be utilized in place of disposable devices.

Esophageal Tracheal Airway Device (ETAD): The "Combitube" is the only such airway approved for prehospital use in San Diego County.

IV/IO: Intravenous/Intraosseous fluids are routinely Normal Saline.

Minor: A person under the age of 18 and who is not emancipated.

Opioid: Any derivative, natural or synthetic, of opium or morphine or any substance that has their effects on opioid receptors (e.g. analgesia, somnolence, respiratory depression).

Opioid Dependent Pain Management Patient: An individual who is taking prescribed opioids for chronic pain management, particularly those with opioid infusion devices.

Opioid Overdose, Symptomatic: Decreased level of consciousness or respiratory depression.

Nebulizer: O_2 powered delivery system for administration of Normal Saline or medications.

Pediatric Patient: Children appearing to be <15 years and appearing to weigh less than 50kg (110 lbs.).
Newborn: up to 30 days
Infant: one month to one year of age.

SD BREATHE: Acronym for the steps to be performed in the assessment and documentation of endotracheal intubation attempts:
Size, **D**epth, **B**reath Sounds, **R**ise & Fall of Chest, **E**sophageal Detection Device, Absence of **A**bdominal Sounds, **T**ube Misting, **H**ospital Verification, **E**nd Title CO_2 Detection Device.

"Shock" is defined by the following criteria:
Patient's age:

1. **>** 15 years:
   Systolic BP <80 mmHg **OR**
   Systolic BP <90 mmHg AND exhibiting any of the following signs of inadequate perfusion:
   a. altered mental status (confusion, agitation)
   b. tachycardia

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c. pallor
d. diaphoresis

2. <15 yrs:
Systolic BP < [70 + (2 x age)] **AND**
exhibiting any of the following signs of inadequate perfusion:
a. altered mental status (confusion, agitation)
b. tachycardia (<5yrs ≥180bpm; ≥5yrs ≥160bpm)
c. pallor
d. diaphoresis
e. comparison (difference) of peripheral vs. central pulses (PALS/PEPP).

Sinus pause: A brief break in tachydysrhythmia that immediately reverts back. During the pause the actual underlying dysrhythmia may be evident. Adenosine is unlikely to convert this dysrhythmia.

Unconsciousness: No purposeful response to stimulation.

Unstable: BP<90 systolic and chest pain, dyspnea or altered LOC.

SAN DIEGO COUNTY TREATMENT PROTOCOL
ABBREVIATION LIST

AED	Automated External Defibrillator
AICD	Automatic Implanted Cardiac Defibrillator
ALS	Advanced Life Support (Paramedic level)
ALTE	Apparent Life Threatening Event
AV	Arterio-Venous (fistula)
BH	Base Hospital
BHO	Base Hospital Order
BHP	Base Hospital Physician
BHPO	Base Hospital Physician Order
BLS	Basic Life Support (EMT level)
BP	Blood Pressure
BPM	Beats Per Minute
BS	Blood Sugar (Blood Glucose)
BSA	Body Surface Area
$CaCl_2$	Calcium Chloride
C/C	Chief complaint
CO	Carbon Monoxide
CPR	Cardio-Pulmonary Resuscitation
CVA	Cerebrovascular Accident
d/c	Discontinue
dl	Deciliter
D_{25}	25% Dextrose (diluted D_{50})
D_{50}	50% Dextrose
EKG	Electrocardiogram
ET	Endotracheal Tube
ETAD	Esophageal Tracheal Airway Device
GM	Gram
HR	Heart Rate
ICS	Intercostal space
IM	Intramuscular (injection)
IO	Intraosseous line
IV	Intravenous line
IVP	Intravenous Push
J	Joule (s)
Kg	Kilogram
L	Liter
LOC	Level of Consciousness or Loss of Consciousness
max	Maximum
mcg	Microgram
mEq	Milliequivalent
mg	Milligram
min	Minute
ml	Milliliter(s)
MOI	Mechanism of injury
MR	May repeat

Approved:

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MS	Morphine Sulfate
$NaHCO_3$	Sodium Bicarbonate
NG	Nasogastric (tube)
NPO	Nothing by mouth
NS	Normal Saline (IV solution)
NTG	Nitroglycerin
O_2	Oxygen
OD	Overdose
PEA	Pulseless Electrical Activity
PO	Per Os (by mouth)
prn	Pro Re Nata (as often as necessary)
PVC	Premature Ventricular Contraction
q	Every
SL	Sublingual
SC	Subcutaneous (injection)
SO	Standing Order
SOB	Shortness of Breath
SVT	Supraventricular Tachycardia
TIA	Transient Ischemic Attack
TKO	To Keep Open (IV) which is approximately 25-30ml/hr
VF	Ventricular Fibrillation
VSM	Valsalva Maneuver
VT	Ventricular Tachycardia
yo	Years Old
?	Possible/questionable/suspected
"	Minutes or Inches
<	Less than
≥	Greater than or equal to

Approved:

EMS Medical Director

SUBJECT: BLS/ALS AMBULANCE INVENTORY **Date: 7/1/04**

I. Authority: Health and Safety Code, Division 2.5, Section 1797.204.

II. Purpose: Identify a minimum standardized inventory on all Basic Life Support and Advanced Life Support Transport Units.

III. Policy: Essential equipment and supplies are required by California Code of Regulations, Title 13, Section 1103.2(a) 1-2 (for vehicle requirements refer to Policy # B 833). Each Basic Life Support or Advanced Life Support Transporting Unit in San Diego County shall carry as a minimum, the following:

Basic Life Support Requirements:

	Minimum
Ambulance cot and collapsible stretcher	1 each
Straps to secure the patient to the cot or stretcher	1 set
Ankle and Wrist Restraints	1 set
Linens (Sheets, pillow, pillow case, blanket, towels)	2 sets
Oropharyngeal Airways	
Adult	2
Pediatric	2
Infant	1
Newborn	1
Pneumatic or rigid splints	4
Bag-valve-mask w/reservoir and clear resuscitation mask	
Adult	1
Pediatric	1
Infant	1
Oxygen Cylinder w/wall outlet (H or M)	1
Oxygen tubing	1
Oxygen Cylinder - portable (D or E)	2
Oxygen administration mask	
Adult	4
Pediatric	2
Infant	2
Nasal cannulas (clear plastic) Adult	4
Nasal airways (assorted sizes)	1 set
Nebulizer for use w/sterile H_2O or saline	2
Glucose Paste/Tablets	1 tube or 9 tablets
Bandaging supplies	
4" sterile bandage compresses	12
3x3 gauze pads	4
2", 3", 4" or 6" roller bandages	6
1", 2" or 3" adhesive tape rolls	2
Bandage shears	1
10"x 30" or larger universal dressing	2
Emesis basin (or disposable bags)	1
Covered waste container	1
Portable suction equipment (30 L/min, 300 mmHg)	1
Suction device - fixed (30 L/min, 300 mmHg)	1
Suction Catheter - Tonsil tip	3

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Suction Catheter (6, 8, 10, 12, 14, 18)	1 set
Head Immobilization device	2 each
Spinal Immobilization devices (1 min. 30", 1 min. 60") with straps**	1 each
Cervical collars - rigid	
Adult	3
Pediatric	2
Infant	2
Traction splint*	
Adult or equivalent	1
Pediatric or equivalent	1
Blood pressure manometer & cuff	
Adult	1
Pediatric	1
Infant	1
Obstetrical Supplies to include:	1 kit
gloves, umbilical tape or clamps, dressings, head coverings, ID bands, towels, bulb syringe, sterile scissors or scalpel, clean plastic bags	
Potable water (1 gallon) or Saline (2 liters)	1
Bedpan	1
Urinal	1
Disposable gloves - non-sterile	1 box
Disposable gloves - sterile	4 pairs
Cold packs	2
Warming packs (not to exceed 110 degrees F)	2
Sharps container (OSHA approved)	1
Agency Radio	1
EMS Radio	1

Optional Item:

Positive Pressure Breathing Valve, maximum flow 40 Liters/min.	1

Advanced Life Support Requirements:

All supplies and equipment in Basic Life Support Requirements in addition to the following:

A. Airway Adjuncts:	Minimum
Aspiration based endotracheal tube placement verification devices	2
End Tidal CO_2 Detection Devices (<15kg, ≥15kg)	2 each
Endotracheal Tubes: Sizes:	
2.5, 3.0, 3.5, 4.0, 4.5, 5.0, 5.5 (uncuffed)	1 each
6, 6.5, 7, 7.5, 8, 8.5, 9 (cuffed)	1 each
Esophageal Tracheal Double Lumen Airway (Kit) (Combitube):Reg, Sml Adult**	2 each
ET Adapter	1 setup
Feeding Tube - 8 French	1
Laryngoscope - Handle	2
Laryngoscope - Blade:	
curved and straight sizes 0-2	1 each
curved and straight sizes 3-4	1 each
Magill Tonsil Forceps small and large	1 each
Mask - Bag-valve-mask Neonate size	1
Stylet *6 and 14 French,* Adult	1 each

Approved:

EMS Medical Director

B. Vascular Access/Monitoring Equipment	Minimum
Armboard: Long	2
Armboard: Short	2
Blood Glucose Monitoring Device**	1
IV Administration Sets: Macrodrip	6
Microdrip	3
Three-Way Stopcock with extension tubing	2
IV Tourniquets	4
Needles: IV Cannula - 14 Gauge	8
IV Cannula - 16 Gauge	8
IV Cannula - 18 Gauge	8
IV Cannula - 20 Gauge	6
IV Cannula - 22 Gauge	4
IV Cannula - 24 Gauge	4
IM - 21 Gauge X 1"	6
IO –Jamshidi-type needle – 18 Gauge	*2*
IO – Jamshidi-type needle – 15 Gauge	*2*
S.C. 25 Gauge X 3/8"	4
Syringes: 1 ml, 3 ml, 5 ml, 10 ml, 20 ml	3 each

C. Monitoring	
Conductive Gel/Defibrillator pads	1 tube/2 pkgs
Defibrillator/ Scope Combination	1
Defibrillator Paddles *(4.5 cm,* 8.0 cm*)* or Pads (hands free)	1 pair each
Electrodes	1 box
Electrode Wires	2 sets
Oxygen Saturation Monitoring Device **	1
Adult probe	1
Infant/Pediatric	1

D. Packs	
Drug Box	1
Personal Protective Equipment (masks, gloves, gowns, shields)	2 sets
Trauma Box/Pack	1

E. Other Equipment	
Broselow Tape	1
Nasogastric Intubation Set-Up (12 or 14, 18 French 48")	1 each
Pediatric Drug Chart (laminated)	1
Thermometer - Oral, Rectal	1 each
Water Soluble Lubricant	1

Approved:

EMS Medical Director

F. Communication Items:		Minimum
Communication Failure protocol (laminated)		1
Standing Orders Protocol (laminated)		1
G. Replaceable Medications:		
Adenosine	6 mg/2ml vial	6 vials
Albuterol:	2.5 mg/3 ml or 0.083%	6 vials
ASA, chewable:	80 mg each individually wrapped	6 units
Atropine Sulfate:	1 mg/10 ml	3
Atropine Sulfate:	multidose 0.4 mg/ml	1
Atrovent	2.5 ml (1 unit dose vial) or 0.02%	2
Calcium Chloride:	1 GM/10 ml	1
Charcoal activated (no sorbitol)	50 GM	1
Dextrose, 50%:	25 GM/50 ml	2
Diphenhydramine HCL:	50 mg/1 ml	2
Dopamine HCL:	400 mg	1
Epinephrine:	1:1,000 multidose vial	1
Epinephrine:	1:1,000 (1 mg/1ml ampule)	6
Epinephrine:	1:10,000 (1 mg/10 ml vial)	6
Furosemide:	20 mg/40 mg/100 mg vial	100mg total
Glucagon:	1 ml (1 unit)	1
Lidocaine HCL:	100 mg/5 ml (2%)	6
Morphine Sulfate (injectable):	10 mg/1 ml	2
Morphine Sulfate (Oral Immediate Release)	10 mg/5 ml	3
Naloxone HCL (Narcan):	1 mg/1 ml concentration	6 mg total
Nitroglycerin:	0.4 mg	1 container
Nitroglycerin topical preparation:	2%	1 tube
Sodium Bicarbonate:	50 mEq/50 ml	3
Verapamil HCL	5 mg	2
Versed (Midazolam)	5mg/1ml concentration	20mg total
IV Solutions:		
Normal Saline	1000 ml bag	4
Normal Saline	250 ml bag	4
H. Optional Items:		
Dopamine	400 mg in 250 ml D5W	1
12 Lead EKG		
Cardiac compression monitor (CPR Plus)		
Lidocaine 2%Jelly - 5 ml tube		
Capnographer (quantitative or qualitative)		
External pacing equipment and supplies		1 set
Tympanic thermometer		

Note: ***Pediatric required supplies denoted by italics.***

* One splint may be used for both adult & pediatric e.g. Sager Splint

** Unit may remain in service until item replaced or repaired.

Approved:

EMS Medical Director

SKILL	INDICATION	STANDING ORDER	CONTRAINDICATION	COMMENTS
Blood sampling Venous/capillary	Obtain blood sample to determine treatment.	Yes	None	
Broselow Tape	Determination of length for calculation of pediatric drug dosages and equipment sizes.	Yes	None	Base dosage calculation on length and weight of child. Refer to pediatric chart for dosages (P-117).
Cardioversion: synchronized	Unstable VT Unconscious SVT Atrial fibrillation/flutter Unconscious and BP < 90 systolic	Yes	**Pediatric:** If defibrillator unable to deliver <5 J or biphasic equivalent	In addition to NTG patches, remove chest transderrmal medication patches prior to cardioversion.
	Unstable SVT Uncontrolled Atrial Fibrillation/Flutter (*BHPO*)	No		
Defibrillation	VT (pulseless) VF Cardiac arrest, unmonitored	Yes	None	In addition to NTG patches, remove chest transderrmal medication patches prior to defibrillation.

Approved:

EMS Medical Director

SKILL	INDICATION	STANDING ORDERS	CONTRAINDICATIONS	COMMENTS
Dermal Medication	When route indicated.	Yes*	Profound shock, CPR, Peds	Avoid application to areas that may be used for cardioversion.
ET/ETAD Medication	When ET/ETAD route is indicated	Yes*	None	**ET**: Dilute adult dose to 10ml & peds dose to 3ml with NS. **ETAD:** Esophageal placement, via Port #1 (blue). Epinephrine 10mg diluted to 20ml volume. Tracheal placement – Medications same as ET dose via Port #2 (white).
EKG monitoring	Any situation where potential for cardiac dysrhythmia.	Yes	None	Apply monitor before moving patient with chest pain, syncope, or in arrest. Document findings on PPR and leave strip with patient.
12 lead EKG (optional)	Signs and symptoms suggestive of myocardial infarction.	Yes	None	Document findings on the PPR and leave strip with patient.
End tidal CO_2 Detection Device	All intubated patients	Yes	None	Monitor continuously after ET / ETAD insertion May not detect CO2 levels in pulseless rhythms. Use Pedicap in patients <15 kgs.
Esophageal Detection Device-aspiration based	All intubated patients	Yes	Patient <20 kg	Repeat as needed to reconfirm placement. Use for both ET/ETAD.
External Cardiac Pacemaker	Unstable bradycardia with a pulse refractory to Atropine	No	None	BHPO Document rate setting, milliamps and capture

Approved:

EMS Medical Director

SKILL	INDICATION	STANDING ORDER	CONTRAINDICATIONS	COMMENTS
Glucose Monitoring	Symptomatic ?hypoglycemia	Yes	None	
Injection: IM	When IM route indicated	Yes*	None	Usual site: Deltoid in patients ≥3 yo. Vastus lateralis patients <3 yo.
Injection: SC	When SC route indicated.	Yes*	None	Preferred site-fatty tissue of upper arm.
Injection: IVP	When IVP route indicated	Yes*	None	
Injection: Direct IVP	When direct IVP route indicated	Yes*	None	
Intubation- ET/**Stomal**	Apnea or ineffective respirations for unconscious patient or decreasing LOC. Newborn deliveries if HR<60 after 30 seconds of ventilation To replace ETAD if: • ventilations inadequate OR • need ET suction OR • need to give ET medications	Yes	? Opioid OD prior to Narcan.	3 attempts per patient SO Additional attempts *BHPO* Attempt=attempt to pass ET (not including visualizations and suctioning). Document and report SD BREATHE. Reconfirm and report $EtCO_2$ and lung sounds after each pt movement. Extubation per BHO. ET Depth Pediatrics: Age in years plus 10. When using uncuffed tube, immobilize spine.
ETAD (Combitube)	Apnea or ineffective respirations for unconscious patient or decreasing LOC.	Yes	Gag reflex present Patient <4' tall. ? Opioid OD prior to Narcan. Ingestion of caustic substances. Hx esophageal disease. Laryngectomy/Stoma	Extubate per BHO. Use Small Adult size tube for pts 4'-5'6" tall and Use Adult size for patients ≥ 5' tall. Report and document SD BREATHE and ventilation port number. Reconfirm and report EtCO2 and lung sounds after each pt movement.

Approved:

EMS Medical Director

SKILL	INDICATION	STANDING ORDER	CONTRAINDICATION	COMMENTS
Magill Forceps	Airway obstruction from foreign body with decreasing LOC/unconscious	Yes	None	
Nebulizer, oxygen powered	Respiratory distress with: • Bronchospasm • Croup-like cough • Stridor	Yes*	None	Flow rate 4- 6 L/min. via mouthpiece; 6-10 L/min. via mask/ET.
Needle Thoracostomy	Severe respiratory distress with unilateral, absent breath sounds and systolic BP <90 in intubated or positive pressure ventilated patients.	No	None	BHO Use 14g IV catheter Insert catheter into anterior axillary line 4th/5th ICS on involved side (preferred) **OR** Insert into 2nd/3rd ICS in Mid- Clavicular Line on the involved side. Tape catheter securely to chest wall and leave open to air.
NG	Uncuffed intubations. Gastric distention interfering w/ ventilations	Yes	Severe facial trauma. Known esophageal disease.	
Precordial Thump	Monitored/unmonitored witnessed arrest, initial onset VF/VT	Yes	None	
Prehospital Pain Scale	All patients with a traumatic or pain-associated chief complaint	Yes	None	Assess for presence of pain and intensity
Prehospital Stroke Scale	All adult patients with suspected Stroke/CVA	Yes	None	Assess facial droop, arm drift, & speech.

Approved:

EMS Medical Director

SKILLS	INDICATION	STANDING ORDER	CONTRAINDICATION	COMMENTS
Pulse Oximetry	Assess oxygenation	Yes	None	Obtain room air saturation if possible, prior to O_2 administration.
Re-Alignment of Fracture	Grossly angulated long bone fracture	Yes	None	Use unidirectional traction. Check for distal pulses prior to realignment and every 15 min. thereafter.
Removal of Impaled Object	Compromised ventilation of patient with impaled object in face/cheek or neck.	Yes	None	
Spinal Immobilization	Spinal pain of ?trauma MOI suggests ?potential spinal injury Uncuffed Intubations	Yes	None	Pregnant patients (>6mo) tilt 30 degree left lateral decubitus. Optional if **all of the following are present and documented:** Adult Patient 1. awake, oriented to person, place & time 2. no drug/ETOH influence 3. no pain/tenderness of neck or back upon palpation 4. no competing pain 5. cooperative Pediatric Patient N=no altered LOC E=evidence of obvious injury absent C=complete spontaneous ROM without pain K=kinematic (mechanism) negative
Valsalva Maneuver	Stable/ Unstable SVT	Yes	None	Most effective with adequate BP D/C after 5-10 sec if no conversion
VASCULAR ACCESS External jugular	When unable to establish other peripheral IV and IV is **needed for definitive therapy ONLY.**	Yes	None	Tamponade vein at end of catheter until tubing is securely attached to cannula end.

Approved:

EMS Medical Director

SKILL	INDICATION	STANDING ORDER	CONTRAINDICATIONS	COMMENTS
Extremity	Whenever IV line is needed or anticipated for definitive therapy.	Yes	None	
Indwelling Devices	Primary access site for patients with indwelling catheters **if needed for definitive therapy ONLY**	Yes	Devices without external port	Infuse at a rate to support continuous flow and prevent backflow into IV line. Needleless systems may require adaptor. Examples include Groshong, Hickman.
Intraosseous	Fluid/medication administration in acute status pediatric patient < 8 years old when unable to establish other IV.	Yes	Age ≥ 8 years Tibial fracture Vascular Disruption Prior attempt to place in target bone	Splint extremity Observe carefully for signs of extravasation Do not infuse into fracture site Neonate < 28 days old BHO (<1 cm in depth) Do not use spring-loaded IO needles
Percutaneous DialysisCatheter Access (e.g. Vascath)	Unable to establish other peripheral IV and **IV is needed for definitive therapy ONLY.**	Yes	None	Vas Cath contains concentrated dose of Heparin which must be aspirated PRIOR to infusion. Infuse at a rate to support continuous flow and prevent backflow into IV line. Needleless systems may require adaptor.
Shunt/graft - AV (Dialysis)	Unable to establish other peripheral IV and **IV is needed for definitive therapy ONLY.**	Yes	None	Prior to access, check site for bruits and thrills. Access fistula on venous side (weaker thrill). Inflate BP cuff around IV bag to just above patient's systolic BP to maintain flow of IV. If unsuccessful, hold direct pressure over site for 10" to stop bleeding. Do not apply pressure dressing.

* When medication by that route is a SO.

Approved:

EMS Medical Director

SUBJECT: Latex-Safe Equipment List **Date: 7/1/04**

I. Authority: Health and Safety Code, Division 2.5, Section 1797.204.

II. Purpose: Identify essential equipment that must be available for use with patients identified as latex-sensitive.

III. Policy: Prehospital personnel shall be prepared to manage patients that are identified as latex-sensitive in a manner that is as latex-safe as possible. Prehospital provider agencies shall attempt, when possible, to use patient equipment that minimizes exposure to latex containing products, and shall, at a minimum, maintain the items indicated below for use with patients identified as latex-sensitive. Provider agencies shall maintain documentation demonstrating the latex-safety of the equipment listed below. ALS ambulances shall maintain the complete listing below. BLS ambulance requirements are designated "+."

	Minimum
A. Airway Adjuncts:	
Bag-valve-mask device with reservoir, adult and pediatric	1 each
Endotracheal Tubes: Sizes: 6, 6.5, 7, 7.5, 8, 8.5, 9	1 each
Nasal Airways +, Assorted Sizes	1 package
O_2 Cannula +	1 each
Positive Pressure Breathing Valve + - Mask must be latex-safe	1 each
Stylet	1 each
Suction Catheters (12, 14, 18 fr.)	1 each
Suction Catheters, Tonsil Tip + (Yankauer)	1 each
B. Vascular Access/Monitoring Equipment	
Armboard: Long (barrier protection acceptable)	1 each
Armboard: Short (barrier protection acceptable)	1 each
Blood Pressure Cuff + (barrier protection acceptable)	1 each
I.V. Administration Sets: (barrier protection acceptable)	
Macrodrip	1 each
Microdrip	1 each
IV Tourniquets	1 each
Needles: I.V. Cannula - 14 Gauge	1 each
I.V. Cannula - 16 Gauge	1 each
I.V. Cannula - 18 Gauge	1 each
I.V. Cannula - 20 Gauge	1 each
Three-Way Stopcock with extension tubing	2 each
Syringes: 1 ml, 3 ml, 5 ml, 10 ml, 20 ml	1 each
Stethoscope + (barrier protection acceptable)	1 each
C. Monitoring	
Defibrillator pads +	1 pkg
Electrodes +	1 box
	Minimum

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EMS Medical Director

D. Splinting Devices:

Extrication Collars +, Rigid, Adult	1 each
Traction Splint + (barrier protection acceptable)	1 each

E. Packs

*Personal Protective Equipment + (masks, gloves, gowns, shields)	2 sets

F. Other Equipment

Cold Packs + (barrier protection acceptable)	1 each
Hot packs + (barrier protection acceptable)	1 each
Nasogastric Intubation Set-Up (12 or 14, 18 fr. 48")	1 each

H. **Replaceable Medications:

Tool to remove latex caps from multi-dose vials with latex plugs

IV Solutions:

Normal Saline (barrier protection acceptable)	1000ml bag	1
Normal Saline (barrier protection acceptable)	250 ml bag	1

I. OB/Pediatric supplies

Bulb Syringe +	1

* Prehospital staff should minimize their own exposure to latex products at all times

** Staff shall be knowledgeable in procedures to use latex-containing products in a latex-safe manner. Such methods include:

> barrier protective measures (for stethoscope, for example). If barrier protection is used, materials should be easily available to implement the barrier.

> procedures to remove or cover latex-containing parts (such as the caps on multi-dose medication vials).

Note: See EMS Treatment Protocol S-122: Allergic Reaction/Anaphylaxis for additional information.

Questions regarding the management of latex-sensitive patients should be referred to the Base Hospital.

Approved:

EMS Medical Director

SUBJECT: EMERGENCY MEDICAL TECHNICIAN-DEFIBRILLATION **Date: 7/1/04**
AUTOMATED EXTERNAL DEFIBRILLATOR (AED) AND
ESOPHAGEAL TRACHEAL AIRWAY DEVICE (ETAD) STANDING ORDERS

These standing orders are for cardiac arrest patients that appear to be ≥1 years of age (excluding penetrating trauma to head, neck, or trunk).

SHOCKABLE RHYTHM

1. Determine patient to be unconscious, pulseless, and with absent or agonal respirations.
2. Initiate CPR; ventilate with 100% oxygen if possible.
3. Turn on automated defibrillator (AED), attach defibrillator pads; press analyze. (Verbally record patient incident scenario as soon as possible, if recording device equipped.)
4. Allow AED to determine the underlying cardiac rhythm.
5. When the AED determines that a shock is to be delivered, defibrillate*
6. Re-analyze
7. Deliver the second and third shocks, as prompted to do so by the AED*
8. Check carotid pulse for 5-10 seconds.
9. If the victim remains pulseless after the initial series of three shocks, give four deep ventilations, insert appropriate ETAD (if patient appears to be 4 feet or taller) and perform 1 minute of CPR.
10. Check pulse
11. Reanalyze patient and continue with defibrillation and CPR in accordance with criteria established by Defibrillation Medical Director.

A. TRANSPORTING RESPONDERS and/or ALS RENDEZVOUS:
   1. After sixth shock is delivered, prepare patient for transport to basic emergency facility (BEF) or rendezvous site.
   2. Once patient is in the rig, you may reanalyze, if indicated by "check patient" prompt. Proceed as indicated by AED. If no shock indicated, proceed with CPR and transport.
   3. While en route, if a "check patient" prompt is received, pull to side of road and analyze. Proceed as indicated by AED. **(ONE TIME ONLY)**

B. NON-TRANSPORTING RESPONDERS:
   1. If patient persists in a shockable rhythm, continue serial administration of three (3) shocks, as per protocol, until arrival of transport unit.
   2. If patient presents with three (3) consecutive non-shockable rhythms, continue CPR and do not reanalyze unless AED prompts, "check patient".

*** SPECIFICATIONS FOR AUTOMATED EXTERNAL DEFIBRILLATORS (AED)**:

Monophasic AED's must be programmed to deliver the initial shock at 200 w/s and the second shock at 200 w/s or 300 w/s and the third and all subsequent shocks at 360 w/s.

Biphasic AED's must be programmed to deliver shocks with equivalent efficacy to shocks delivered by monophasic devices.

Approved:

EMS Medical Director

SUBJECT: EMERGENCY MEDICAL TECHNICIAN-DEFIBRILLATION **Date: 7/1/04**
AUTOMATED EXTERNAL DEFIBRILLATOR (AED) AND
ESOPHAGEAL TRACHEAL AIRWAY DEVICE (ETAD) STANDING ORDERS

NON-SHOCKABLE RHYTHM

1. Determine patient to be unconscious, pulseless, and with absent or agonal respirations.
2. Initiate CPR; ventilate with 100% oxygen if possible.
3. Turn on AED; attach defibrillator pads; analyze (Verbally record patient incident scenario as soon as possible, if recording device equipped.
4. Allow AED to determine underlying cardiac rhythm.
5. When AED determines rhythm is non-shockable, check carotid pulse for 5-10 seconds.
6. Give four deep ventilations then insert ETAD (if patient appears 4 feet or taller).
7. If no pulse found, resume CPR for 1 minute.
8. Reanalyze.
9. If rhythm remains non-shockable, check carotid pulse for 5-10 seconds.
10 If no pulse found, resume CPR for 1 minute.
11. Reanalyze
12. If rhythm remains non-shockable, check carotid pulse for 5-10 seconds.
13. If no pulse found, resume CPR until a "check patient" message is given.
14. While doing CPR, check for a carotid pulse every 3-5 minutes.

SPECIAL CIRCUMSTANCES

1. If patient is found with agonal respirations <6/min or apnea give four deep ventilations insert ETAD (if patient appears 4 feet or taller), then:
   A. with a pulse of < or = 30bpm per minute, ventilate the patient and continue to monitor the carotid pulse. Reassess the pulse after one (1) minute. If pulse rate continues <30bpm, begin CPR and reassess pulse at one (1) minute intervals.
   B. with a pulse of >30bpm: ventilate the patient and continue to monitor carotid pulse
      1. **TRANSPORTING RESPONDERS**: prepare patient for transport and continue as above.
      2. **NON-TRANSPORTING RESPONDERS**: continue as above.

NOTE: If patient becomes pulseless, attach AED and analyze. Proceed as per shockable/non-shockable protocol.

2. For patient with return of pulse after shockable rhythm:
   A. If carotid rate is < or=30 bpm, continue to ventilate patient, perform CPR and recheck pulse rate every one (1) minute.
   B. If rate greater than 30 bpm, continue to ventilate and reassess pulse at intervals.

SHOULD A "CHECK PATIENT" PROMPT BE RECEIVED, ANALYZE AND PROCEED AS PER PROTOCOL.

NOTE:
1. Do not press "ANALYZE" in moving vehicle. If status deteriorates during transport, pull to side of road and stop ambulance. Then analyze and follow algorhythm.
2. During transport, the defibrillator should stay on to continue recording.

NOTE: Patients in cervical collar precautions, may be placed in manual traction to insert ETAD (if patient appears 4 feet or taller) and then placed back in cervical collar precautions, if difficulty in insertion exists.

Approved:

EMS Medical Director

SUBJECT: EMERGENCY MEDICAL TECHNICIAN/PUBLIC SAFETY-DEFIBRILLATION
AUTOMATIC EXTERNAL DEFIBRILLATOR (AED) STANDING ORDERS **Date: 7/1/04**

These standing orders are for cardiac arrest patients that appear to be ≥1 years of age (excluding penetrating trauma to head, neck, or trunk).

SHOCKABLE RHYTHM

1. Determine patient to be unconscious, pulseless, and with absent or agonal respirations.
2. Initiate CPR; ventilate with 100% oxygen if possible.
3. Turn on Automated External Defibrillator (AED), attach defibrillator pads; analyze. (Give patient incident scenario as soon as possible.)
4. Allow AED to determine the underlying cardiac rhythm.
5. When the AED determines that a shock is to be delivered, defibrillate*
6. Reanalyze
7. Deliver the second and third shocks, as prompted to do so by the AED*
8. Check carotid pulse for 5-10 seconds.
9. If the victim remains pulseless after the initial series of three shocks, perform 1 minute of CPR.
10. Check pulse
11. Reanalyze patient and continue with defibrillation and CPR in accordance with criteria established by Defibrillation Medical Director.

A. TRANSPORTING RESPONDERS and/or ALS RENDEZVOUS:
   1. After sixth shock is delivered, prepare patient for transport to basic emergency facility (BEF) or rendezvous site.
   2. Once patient is in the rig, you may reanalyze, if indicated by "check patient" prompt. Proceed as indicated by AED. If no shock indicated, proceed with CPR and transport.
   3. While en route, if a "check patient" prompt is received, pull to side of road and analyze. Proceed as indicated by AED. **(ONE TIME ONLY)**

B. NON-TRANSPORTING RESPONDERS:
   1. If patient persists in a shockable rhythm, continue serial administration of three (3) shocks, as per protocol, until arrival of transport unit.
   2. If patient presents with three (3) consecutive non-shockable rhythms, continue CPR and do not reanalyze unless AED prompts, "check patient".

*** SPECIFICATIONS FOR AUTOMATED EXTERNAL DEFIBRILLATORS (AED)**:

Monophasic AED's must be programmed to deliver the initial shock at 200 w/s and the second shock at 200 w/s or 300 w/s, and the third and all subsequent shocks at 360 w/s.

Biphasic AED's must be programmed to deliver shocks with equivalent efficacy to shocks delivered by monophasic devices.

Approved:

EMS Medical Director

SUBJECT: EMERGENCY MEDICAL TECHNICIAN/PUBLIC SAFETY-DEFIBRILLATION
AUTOMATIC EXTERNAL DEFIBRILLATOR (AED) STANDING ORDERS **Date: 7/1/04**

NON-SHOCKABLE RHYTHM

1. Determine patient to be unconscious, pulseless, and with absent or agonal respirations.
2. Initiate CPR; ventilate with 100% oxygen if possible.
3. Turn on AED; attach defibrillator pads; analyze (Give patient incident scenario as soon as possible.)
4. Allow AED to determine underlying cardiac rhythm.
5. When AED determines rhythm is non-shockable, check carotid pulse for 5-10 seconds.
6. If no pulse found, resume CPR for 1 minute.
7. Reanalyze
8. If rhythm remains non-shockable, check carotid pulse for 5-10 seconds.
9. If no pulse found, resume CPR for 1 minute.
10. Reanalyze
11. If rhythm remains non-shockable, check carotid pulse for 5-10 seconds.
12. If no pulse found, resume CPR until a "check patient" message is given.
13. While doing CPR, check for a carotid pulse every 3-5 minutes.

SPECIAL CIRCUMSTANCES

1. If patient is found with agonal respirations or apnea:
   A. and a pulse of < or = 30 bpm per minute, ventilate the patient and continue to monitor the carotid pulse. Reassess the pulse after one (1) minute. If pulse rate continues <30 bpm, begin CPR and reassess pulse at one (1) minute intervals.
   B. and a pulse of >30 bpm: ventilate the patient and continue to monitor carotid pulse
      1. **TRANSPORTING RESPONDERS**: prepare patient for transport and continue as above.
      2. **NON-TRANSPORTING RESPONDERS**: continue as above.

NOTE: If patient becomes pulseless, attach AED and analyze. Proceed as per shockable/non-shockable protocol.

2. For patient with return of pulse after shockable rhythm:
   A. If carotid rate is < or = 30 bpm, continue to ventilate patient, perform CPR and recheck pulse rate every one (1) minute.
   B. If rate greater than 30 bpm, continue to ventilate and reassess pulse at intervals.

SHOULD A PROMPT TO CHECK PATIENT BE RECEIVED, ANALYZE AND PROCEED AS PER PROTOCOL.

NOTE:
1. Do not press "ANALYZE" in moving vehicle. If status deteriorates during transport, pull to side of road and stop ambulance. Then analyze and follow algorhythm.
2. During transport, the defibrillator should stay on to continue recording.

Approved:

EMS Medical Director

SUBJECT: TREATMENT PROTOCOL -- ALS ADULT STANDING ORDERS **Date: 7/1/04**

ADULT SKILLS

Cardioversion-Synchronized
Unconscious SVT
Unstable VT
Unconscious Atrial Fibrillation/Atrial Flutter with BP < 90mm systolic:
Start at 100 J (or clinically equivalent biphasic energy dose) MR at 200, 300, 360 J (or clinically equivalent biphasic energy dose).

Defibrillation
VT (pulseless)/ VF. Start at 200 J, repeat prn at 300 J x1, then 360 J prn if no conversion (or clinically equivalent biphasic energy dose).

Glucose Monitoring
Symptomatic ?Hypoglycemia.

Indwelling Devices
Use pre-existing external indwelling vascular access devices as primary vascular access. Use hemodialysis vascular access/fistula/graft if unable to start IV for definitive therapy purposes only.

Intubate (ET/Stomal/ETAD)
Apnea or ineffective respirations for unconscious patient or decreasing LOC.

Magill Forceps with direct Laryngoscopy
Airway obstruction from foreign body with decreasing LOC or unconscious.

Nasogastric Tube Insertion
Gastric distension interfering with ventilation.

Precordial Thump
Monitored/unmonitored witnessed arrest, initial onset VF/VT.

Re-alignment of Fracture
Grossly angulated long bone fracture with gentle unidirectional traction if necessary for splinting.

Removal of Impaled Object
Compromised ventilation of patient with impaled object in face/cheek or neck.

Valsalva Maneuver
Stable/Unstable SVT.

Approved:

EMS Medical Director

MEDICATIONS

MEDICATION	DOSAGE / ROUTE/INDICATION
Albuterol	Respiratory distress with bronchospasm **OR** Allergic reaction in presence of respiratory distress with bronchospasm: • 6ml of 0.083% via nebulizer. MR
Adenosine	Stable/unstable SVT with no history of bronchospasm or COPD: • 6 mg IVP followed by 20ml NS IVP • If no sinus pause, 12 mg IVP followed by 20 ml NS IVP. • If no sinus pause, MR x1 in 1-2”
ASA	Discomfort/Pain of suspected Cardiac Origin: 162mg PO
Atropine	Unstable Bradycardia with Pulse < 60: • 0.5mg IVP. MR 0.5mg to 1 mg IVP to max 3 mg • 1mg ET. MR 1 to 2 mg to max of 6 mg administered dose Asystole/PEA rate < 60: • 1mg IVP. MR to max of 3 mg • 2mg ET. MR to max of 6 mg administered dose OPP: • 2 mg IVP/IM or 4 mg ET MR q 3-5 min x2
Atrovent	Respiratory distress with bronchospasm **OR** Allergic reaction in presence of respiratory distress with bronchospasm: • 2.5ml 0.02% via nebulizer added to **first** dose of Albuterol
Benadryl	Extrapyramidal reactions **OR** Allergic reaction/anaphylaxis • 50mg slow IVP/IM
D_{50}	BS <75mg/dl in a symptomatic known or unknown diabetic unresponsive to oral glucose agents **OR** BS unobtainable in the symptomatic, known diabetic unresponsive to oral glucose agents: • 25 Gm IVP
Epinephrine 1:10,000	Cardiac arrest: • 1mg IVP. MR x2 q 3-5 min.
Epinephrine 1:1,000	Exposure to known allergen with previous severe reaction and with onset of <u>any</u> allergic symptoms if no known cardiac history and < 55yo **OR** Allergic reaction if severe respiratory distress with bronchospasm or inadequate response to Albuterol/Atrovent if no known cardiac history and < 55yo **OR** Anaphylaxis (shock or cyanosis) **OR** Severe respiratory distress with bronchospasm or inadequate response to Albuterol/Atrovent if no known cardiac history and < 55yo: • 0.3mg SC. MR q10” x2 (total of 3 doses) Cardiac arrest: • 2mg ET. MR x 2 q 3-5 min. • 10mg diluted to 20ml ETAD-esophageal Port 1 (blue), MR x2 q5”

Approved:

EMS Medical Director

MEDICATION	DOSAGE / ROUTE
Glucagon	BS <75mg/dl if no IV and symptomatic known or unknown diabetic unresponsive to oral glucose agents **OR** BS unobtainable in symptomatic, known diabetic unresponsive to oral glucose agents and no IV: • 1ml IM
Lasix	Respiratory Distress with Rales (?cardiac origin): • 40mg or double daily dose to maximum of 100mg IVP
Lidocaine	VF/VT pulseless: • 1.5mg/kg IVP or 3mg/kg ET MR x1 in 3-5" Stable VT **OR** Post Conversion VT/VF with pulse ≥ 60: • 1.5mg/kg IVP. MR 0.5 mg/kg q8-10" to a max of 3 mg/kg **OR** • 3mg/kg ET. MR 1 mg/kg q8-10" to a max of 6 mg/kg administered dose
MS	For treatment of pain score assessment of ≥ 5 with *BP ≥ 100 systolic* (see P-115 for BHPO indications) • 2-4mg IVP. MR to max of 10 mg **OR** • 5mg IM **OR** • 10mg PO Discomfort/pain of suspected cardiac origin where BP ≥ 100 systolic **OR** Respiratory Distress with Rales where BP ≥ 100 systolic: • 2-4 mg IVP. MR to max of 10 mg
Narcan	Symptomatic ?opioid OD (excluding opioid dependent pain management patients): • 2mg IVP/direct IVP/IM. MR • 2mg IM as an additional dose if patient refuses transport
NTG SL	Discomfort/pain of cardiac origin if BP ≥ 100 systolic **OR** Respiratory distress with rales (?cardiac origin) if BP **≥** 100 systolic: • 0.4mg SL, MR x2 q3-5"
NTG Topical	Discomfort/pain of cardiac origin if BP ≥100 systolic **OR** Respiratory distress with rales (?cardiac origin) if BP ≥100 systolic: • 1" ointment
NS	Definitive therapy only: • IV, adjust prn ?Intra-abdominal catastrophe or ?aortic aneurysm **OR** Shock, Hypovolemia **OR** Trauma: • IV 500 ml bolus for BP < 90 systolic. MR to maintain BP 90 systolic ?Hypovolemia in unmonitored arrest **OR** PEA **OR** Shock, normovolemia (anaphylaxis, neurogenic): • IV wide open Shock (?cardiac etiology, septic shock) with clear lung sounds OR Discomfort/Pain of ?Cardiac Origin with associated shock with clear lung sounds • IV 250 ml fluid bolus. MR to maintain BP 90 systolic Burns ≥ 20% 2nd or ≥ 5% 3rd degree and ≥ 15 yo • IV 500 ml in first hour

Approved:

EMS Medical Director

Versed	Generalized seizure lasting ≥5" **OR** Focal seizure with respiratory compromise **OR** Recurrent seizure without lucid interval **OR** Eclamptic seizure: • 0.1mg/kg slow IVP, to a max dose of 5mg. MR x1 in 10" **OR** • 0.2mg/kg IM to a max dose 10mg. MR x1 in 10" Pre-cardioversion for conscious VT: • 1-5 mg slow IVP prn

Note: Maintain previously established, labeled IV solutions, medication delivery systems, and/or other treatment modalities at preset rates.

Approved:

EMS Medical Director

ALS

When unable to communicate with BH while at scene/enroute, IN ADDITION TO STANDING ORDERS, the following may be initiated without BH contact. **Maximum doses include standing order doses.**

CHIEF COMPLAINT	TREATMENT
Severe respiratory distress with bronchospasm **OR** Exposure to Known Allergen with previous severe reaction and with onset of any allergic symptoms (e.g. urticaria, swelling etc.) **(S-122)**:	**If KNOWN cardiac history and/or ≥ 55yo:** ▫ Epinephrine 0.3 mg. 1:1,000 SC MR x2 q10" (total of 3 doses)
Anaphylaxis (shock or cyanosis) **(S-122)**:	▪ Epinephrine 1:10,000 0.1mg slow IVP. MR x2 q10" for persisting symptoms. ▪ Epinephrine 2 mg 1:1,000 ET, MR x2 q10" for persisting symptoms ▪ Dopamine 400mg/250ml at 5-40mcg/kg/min titrate to BP=100-120 systolic
Symptomatic Hypoglycemia **(S-123)**:	Symptomatic, known diabetic unresponsive to oral glucose agents: ▪ D_{50} 25gm IVP, MR after 5" if 2nd BS <75 mg/dl or unobtainable. Symptomatic, unknown diabetic unresponsive to oral glucose agents: ▪ D_{50} 25gm IVP, MR after 5" if 2nd BS <75 mg/dl. ▪ D_{50} 25gm IVP, if BS unobtainable
Cardiac Arrest - Unmonitored (NonTraumatic) **(S-125)**:	▪ Epinephrine 1:10,000 1mg IVP, MR q3-5" **OR** ▪ Epinephrine 1:1000 2mg ET, MR q3-5" **OR** ▪ Epinephrine 1:1000 10mg diluted to 20ml ETAD-esophageal Port 1 (blue), MR q5" ▪ $NaHCO_3$ 1mEq/kg IVP, MR 0.5mEq/kg IVP q10". ▪ If no response after three doses Epinephrine, d/c resuscitative efforts.
Discomfort/Pain of Suspected Cardiac Origin **(S-126)**:	If response to treatment noted, continue treatment and transport. ▪ NTG 0.4mg SL MR q5" if BP ≥ 100 systolic ▪ MS 2-4 mg IV. MR to max 20 mg if BP ≥ 100 systolic Discomfort/Pain of ?Cardiac Origin with Associated Shock: ▪ Dopamine 400mg/250ml at 5-40mcg/kg/min. Titrate to BP=100-120 systolic
Dysrhythmias (S-127) Unstable Bradycardia	▪ Dopamine 400mg /250cc at 5-40mcg/kg/min, titrate BP=100-120 systolic (after max Atropine)
SVT:	**If patient unstable and rhythm refractory to treatment or symptoms are severe:** ▫ Versed 1-5 mg slow IVP prn precardioversion. If age ≥ 60 consider lower dose with attention to age and hydration status. ▪ Synchronized cardioversion at 100 J (or clinically equivalent biphasic energy dose). MR at 200, 300, 360 J (or clinically equivalent biphasic energy dose)

Approved:

EMS Medical Director

VT: Unstable	▪ Synchronized cardioversion at 100 J, MR at 200 J, 300 J, 360 J (or clinically equivalent biphasic energy dose).
VF/Pulseless VT	▪ Epinephrine 1:10,000 1mg IVP, MR q3-5" **OR** ▪ Epinephrine 1:1000 2mg ET, MR q3-5" **OR** ▪ Epinephrine 1:1000 10mg diluted to 20ml ETAD-esophageal Port 1 (blue), MR q5" ▪ $NaHCO_3$ 1mEq/kg IVP, MR 0.5mEq/kg IVP q10"
Pulseless Electrical Activity (PEA) **OR** Asystole	▪ Epinephrine 1:10,000 1mg IVP, MR q3-5". **OR** ▪ Epinephrine 1:1000 2mg ET, MR q3-5" **OR** ▪ Epinephrine 1:1000 10mg diluted to 20ml ETAD-esophageal Port 1 (blue), MR q5" ▪ $NaHCO_3$ 1mEq/kg IVP, MR at 0.5mEq/kg IVP q10" ▪ If no response after 3 doses of Epinephrine, d/c resuscitative efforts ▪ If response to treatment noted, continue treatment and transport
Poisoning/OD **(S-134)**:	▪ Atropine 2mg IVP/IM or 4mg ET, MR q3-5" for known severe organophosphate poisoning ▪ $NaHCO_3$ 1mEq/kg IVP for ?Tricyclic OD with cardiac effects (e.g. hypotension, heart block, widened QRS or PVCs)
Severe Respiratory Distress with Bronchospasm or inadequate response to Albuterol/Atrovent consider **(S-136)**: Respiratory Distress with Rales (? Cardiac Etiology) **(S-136)**:	Use with caution if known cardiac history and/or ≥ 55 yo ▪ Epinephrine 1:1,000 0.3mg SC, MR q10" x2 enroute ▪ NTG 0.4mg SL MR q5" if BP ≥ 100 systolic or max of 6 doses ▪ Lasix MR to a max of 100mg IVP total dose ▪ MS 2mg increments IVP, MR up to max of 20mg if NTG ineffective/contraindicated
Shock **(S-138)**:	▪ Dopamine 400mg/250ml at 5-40mcg/kg/min, titrate BP=100-120 systolic for shock which is anaphylactic, neurogenic, septic or cardiac in origin.
Trauma **(S-139)**:	▪ IV 1.5 liters/hr and $NaHCO_3$ 1mEq/kg IVP after extremity released in crush injury. ▪ Needle thorocostomy for severe respiratory distress with unilateral breath sounds **and** systolic BP <90 in intubated or positive pressure ventilated patients ▪ Traumatic arrest: consider discontinuing resuscitative measures at scene if no response and extensive transport time
Pain Management **(S-141): For treatment of pain score assessment of ≥ 5 with *BP* ≥ 100 systolic:**	▪ MS MR 2-10mg in 2-4 mg increments IVP to max of 20mg **OR** ▪ MS MR to max of 10mg IM **OR** ▪ MS MR to max of 30mg PO

Approved:

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EMS Medical Director

PEDIATRIC SKILLS

Defibrillation (monophasic/biphasic)
VF/VT (pulseless)

Glucose Monitoring
Symptomatic hypoglycemia.

Indwelling Devices
Use pre-existing external indwelling vascular access devices as primary vascular access. Use hemodialysis vascular access/fistula/graft if unable to start IV for definitive therapy purposes only.

Intraosseous Infusion: Acute status patient < 8 yo when other venous access unsuccessful.
Anaphylaxis
Dysrhythmias
Shock
Trauma
Cardiac arrest (unmonitored, non-traumatic)

Intubate (ET/Stomal/ETAD)
Apnea or ineffective respirations for unconscious patient or decreasing LOC.
Newborn delivery when HR remains <60 bpm after 30 seconds ventilation of 100% O_2.

Magill Forceps with direct Laryngoscopy
Airway obstruction from foreign body with decreasing LOC or unconscious

Nasogastric tube Insertion
Gastric distension interfering with ventilation
Uncuffed intubations

Re-alignment of Fracture
Grossly angulated long bone fracture with gentle unidirectional traction if necessary for splinting.

Removal of Impaled Object
Compromised ventilation of patient with impaled object in face/cheek or neck

Approved:

EMS Medical Director

MEDICATIONS

All medications are per pediatric drug chart unless otherwise noted

MEDICATION	DOSAGE / ROUTE
Albuterol	Respiratory distress with bronchospasm **OR** Allergic reaction in presence of respiratory distress with bronchospasm ▪ Via nebulizer MR prn
Atropine	Symptomatic Organophosphate Poisoning ▪ IVP/IM/ET MR x2 q 3-5" Unstable bradycardia ≥ 30 days ▪ IV/IO/ET MR x1 in 5"
Atrovent	Via nebulizer added to **first** dose of Albuterol
Benadryl	Allergic reaction (may include mild hypotension) **OR** Exposure to known allergen with previous severe reaction and with onset of any allergic symptoms **OR** Anaphylaxis **OR** Extrapyramidal reaction: ▪ IM/IVP
D_{25}	BS <75mg/dl (Infant <60mg/dl) and symptomatic known or unknown diabetic unresponsive to oral glucose agents **OR** BS unobtainable in the known diabetic unresponsive to oral glucose agents ▪ IVP
Epinephrine 1:10,000	Cardiac arrest: ▪ IVP/IO MR X 2 in 3-5"
Epinephrine 1:1000	Cardiac arrest: ▪ ET MR X 2 in 3-5"10mg diluted to 20 ml, ETAD - esophageal Port 1 (blue) Exposure to known allergen with previous severe reaction and with onset of any allergic symptoms **OR** Severe respiratory distress with bronchospasm or inadequate response to Albuterol/Atrovent **OR** Anaphylaxis (shock or cyanosis): ▪ SC MR q10" x2 (total of 3 doses) Respiratory distress with stridor: ▪ Via nebulizer SO

Approved:

EMS Medical Director

All medications are per pediatric drug chart unless otherwise noted

MEDICATION	DOSAGE / ROUTE
Glucagon	BS <75mg/dl (Infant <60mg/dl) if no IV, and symptomatic known or unknown diabetic unresponsive to oral glucose agent **OR** BS unobtainable in known diabetic and no IV, and symptomatic patient unresponsive to glucose agents: ▪ IM
Lidocaine	VF/pulseless VT **OR** Post Conversion VF/VT with pulse ≥ 60 bpm: ▪ IVP/IO/ET MR
Morphine	For treatment of pain score assessment of ≥ 5 with *BP ≥ [70 +(2x age in years)]:* ▪ IV/IM/PO
Narcan	Symptomatic ?opioid OD excluding opioid dependent pain management patients: ▪ Direct IVP/IV/IM. MR
NS	Anaphylaxis **OR** PEA **OR** Shock: ▪ IV/IO adjust prn ▪ IV/IO Fluid Bolus MR if no known history of heart disease For patients with ≥10% 2nd or ≥ 5% 3rd degree burns: 5-14 yo**:** IV NS 250 ml/hr SQ <5 yo**:** IV NS 150 ml/hr SQ
Versed	Generalized seizure lasting ≥5" **OR** Focal seizure with respiratory compromise **OR** Recurrent seizure without lucid interval: ▪ slow IVP/IM

Note: Maintain previously established, labeled IV solutions, medication delivery systems, and/or other treatment modalities at preset rates.

Approved:

EMS Medical Director

SUBJECT: TREATMENT PROTOCOL -- **Date: 7/1/04**

PEDIATRIC STANDING ORDERS FOR COMMUNICATIONS FAILURE

ALS

When unable to communicate with BH while at scene/enroute, **IN ADDITION TO STANDING ORDERS**, the following may be initiated without BH contact. **Maximum doses include standing order doses.**

All medications are per pediatric drug chart unless otherwise noted

CHIEF COMPLAINT	TREATMENT
Symptomatic, unknown diabetic unresponsive to oral glucose agents:	D_{25} IVP if BS unobtainable Glucagon IM if BS unobtainable
Seizures (prolonged focal seizure without respiratory compromise)	Versed IV/IM (d/c if seizure stops). MR x1 in 10"
Anaphylaxis (shock or cyanosis)	IV NS MR to maintain BP ≥ [70 + (2x age)] Epinephrine 1:10,000 slow IVP over 2", MR x2 q5" for persisting symptoms **OR** Epinephrine 1:1000 0.01mg/kg ET, MR x2 q5"
Dysrhythmias **Unstable Bradycardia**	Epinephrine 1:10,000 IVP/IO MR q3-5" Epinephrine 1:1000 ET MR q3-5"
Unstable SVT:	Adenosine rapid IVP; follow with 20ml NS (if no history of bronchospasm). If no sinus pause, Adenosine rapid IVP; follow with 20ml NS If no sinus pause, MR x 1 in 1-2" Versed slow IVP prn precardioversion Synchronized cardioversion (monophasic/biphasic). MR
VF/Pulseless VT:	Epinephrine 1:10,000 IVP/IO MR q 3-5" **OR** Epinephrine 1:1000 ET MR q3-5" **OR** Epinephrine 1:1000 (diluted to 20ml) ETAD esophageal via port 1 (blue). MR q5"
Pulseless Electrical Activity (PEA) **OR** **Asystole**	Epinephrine 1:10,000 IVP/IO MR q 3-5" **OR** Epinephrine 1:1000 ET MR q3-5" **OR** Epinephrine 1:1000 (diluted to 20ml) ETAD esophageal via port 1 (blue), MR q5" If no response after 3 doses of Epinephrine, d/c resuscitative efforts If response to treatment noted, continue treatment and transport.
Cardiac Arrest - Unmonitored (NonTraumatic)	Epinephrine 1:10,000 IVP/IO MR q 3-5" **OR** Epinephrine 1:1000 ET MR q3-5" **OR** Epinephrine 1:1000 ETAD esophageal via port 1 (blue), MR q5" For nonperfusing patients, flush line with NS after administration of each medication
Poisoning/OD	Narcan titrate IVP/direct IVP/IM, MR for ?opioid OD in opioid dependent pain management patients. MR x1 Atropine IVP/IM/ET MR q3-5" for known severe organophosphate poisoning. NaHCO3 IVP x1 for ?Tricyclic OD with cardiac effects (i.e. hypotension, heart block, widened QRS or PVCs).
Shock	IV/IO fluid bolus if lungs clear in normovolemic shock
Trauma	Treat pain as per Pain Management Protocol (P-173) Needle Thoracostomy for severe respiratory distress with unilateral breath sounds AND BP< [70 +(2x age in years)] in intubated or positive pressure ventilated patients. IV for crush injury when extremity released and $NaHCO_3$ IVP Traumatic arrest: consider discontinuing resuscitative measures at scene if no response and extensive transport time.
Pain Management (S-173):	**Pain score assessment of ≥ 5 with BP ≥ [70 +(2x age in years)]:** MS IV MR to max of 20 mg **OR** MS IM MR to max of 10mg IM **OR** MS PO MR to max of 30mg

Approved:

EMS Medical Director

SUBJECT: MOBILE INTENSIVE CARE UNIT INVENTORY - PEDIATRIC **Date: 7/1/04**

I. **Authority**: Health and Safety Code, Division 2.5, Section 1797.204.

II. **Purpose**: Identify a minimum standardized inventory on all Mobile Intensive Care Units.

III. **Policy**: Essential equipment and supplies to be carried on each Mobile Intensive Care Unit (MICU) in San Diego County shall include all items found in the adult inventory as well as the following:

A. Essential equipment and supplies required by California Code of regulations, Title 13, Section 1103.2(a) 1-20.

B. **Pediatric Items:**

	Minimum
1. Airway:	
Bag-valve-mask device with reservoir 250ml, 500ml, 1000ml	1 each
and the following interchangeable masks:	
Premature size	1
Neonate size	1
Child size	1
End Tidal CO_2 detection Device (15kg, $\geq$ 15 kg)	2 each
ET Tubes uncuffed 2.5, 3.0, 3.5, 4.0, 4.5, 5.0, 5.5	1 each
Feeding tube (8 Fr.)	1
Laryngoscope – Blades curved and straight sizes 0, 1, and 2	1 each
Magill Forcep – small	1
Oral Airways 0-5	1 each
O_2 Mask (non rebreather), Pediatric	1
Pedicap End Tidal CO2 Detection Device	2
Stylet (6F and 14F)	1 each
Suction Catheters (5,6,8,10 Fr.)	1 each
2. Birth:	
Bulb syringe	1
Head covering for newborn (or from OB pack)	1
Identification bands for mother/baby (or from OB pack)	1
Sterile Scissors (or scalpel from OB pack)	1
Umbilical Tape (or use clamp from OB pack)	1
Warm packs not to exceed 110 degrees F, or warming device with blanket Match language.	1
3. Immobilization:	
Extrication Collars, Rigid, Child (small, medium, large)	2 each
Traction Splint – Pediatric (or equivalent)	1
4. Vascular Access/Monitoring Devices:	
Defibrillation paddles (4.5.cm, 8.0 cm)	1 pair each
Gauze	1 package
IV cannula 22, 24	4 each
IO – Jamshidi-type needle – 18 Gauge	2
IO – Jamshidi-type needle – 15 Gauge	2
Three-Way Stopcock with extension tubing	2
Broselow Tape	1
Blood Pressure Cuff:	
Infant size	1
Child size	1
Pediatric Drug Chart	1

Approved:

EMS Medical Director

ALS MEDICATION LIST 7/1/04

MEDICATION	INDICATIONS	PROTOCOL	COMMENTS	CONTRAINDICATIONS
ADENOSINE	SVT	S-127, S-163	BHO for patients with history of bronchospasm or COPD. Do not repeat if patient has sinus pause following administration.	Second or third degree AV block Sick Sinus Syndrome (without pacemaker)
ALBUTEROL	Respiratory distress with bronchospasm Allergic Reaction Burns	S-122, S-136, S-162, S-167 S-124, S-170	Inhalation continuous via O_2 powered nebulizer	
ASPIRIN	Pain of ?cardiac origin	S-126		
ATROPINE SULPHATE	PEA HR <60 after Epinephrine dose Unstable Bradycardia HR<60 Organophosphate poisoning	S-127, S-134, S-163, S-165		
ATROVENT	Respiratory distress with bronchospasm Allergic Reaction Burns	S-122, S-136, S-162, S-167 S-124, S-170	Added to first dose of Albuterol via continuous O_2 powered nebulizer	
BENADRYL (DIPHENHYDRAMINE)	Allergic reaction Anaphylaxis Extrapyramidal reaction	S-122, S-134, S-162, S-165	IVP - administer slowly	
CALCIUM CHLORIDE	Suspected hyperkalemia in hemodialysis patient in presence of widened QRS complex and peaked T waves	S-131		

APPROVED:

EMS MEDICAL DIRECTOR

ALS MEDICATION LIST 7/1/04

MEDICATION	INDICATIONS	PROTOCOL	COMMENTS	CONTRAINDICATIONS
CHARCOAL (no Sorbitol)	Ingestion	S-134, S-165	Assure patient has gag reflex and is cooperative.	Alcohol, heavy metal, caustic agents, hydrocarbons or iron ingestion
D_{50} (Dextrose 50%) **OR** D_{25} (Dextrose 25%) Peds	Symptomatic hypoglycemia: if BS <75mg/dl (Infant <60mg/dl) if BS unobtainable	S-123, S-161		
DOPAMINE HYDROCHLORIDE	Shock in presence of normovolemia Discomfort/Pain of ?cardiac origin with associated shock Anaphylaxis Bradycardia (after max Atropine)	S-138 S-122 S-126 S-127	Titrate to maintain BP = 100-120 systolic	
EPINEPHRINE	Pulseless rhythms Allergic reaction Anaphylaxis Respiratory distress with bronchospasm Respiratory distress with stridor	S-125, S-127, S-163, S-171, S-122, S-162 S-136, S-167	**ETAD if ventilating via esophageal Port 1 (blue):** dilute to 20ml volume **ETAD if ventilating via tracheal Port 2 (white):** use ET doses **SC:** BHO if patient ≥55yo and history of known cardiac disease	
GLUCAGON	Unable to start IV in patient with symptomatic hypoglycemia if BS <75mg/dl (Infant <60mg/dl) if BS unobtainable	S-123, S-161		

APPROVED:

EMS MEDICAL DIRECTOR

ALS MEDICATION LIST 7/1/04

MEDICATION	INDICATIONS	PROTOCOL	COMMENTS	CONTRAINDICATIONS
LASIX (FUROSEMIDE)	Respiratory distress with rales (?cardiac etiology)	S-136	If on Bumex, give max dose of 100 mg	
LIDOCAINE (XYLOCAINE)	VT VF/ pulseless VT Post conversion from VT/VF with HR ≥ 60 bpm	S-127, S-163	Adult doses should be given in increments rounded to the nearest 25mg amount. In the presence of shock, CHF or liver disease, the repeat bolus is recommended at 10" intervals.	Second and third degree heart block and idioventricular rthymn
LIDOCAINE JELLY (2%) optional	Intubation or Nasopharyngeal airway		Apply to ET tube or nasal airway	
MORPHINE SULPHATE (MS)	Burns Envenomation injury Trauma Pain or discomfort of ?cardiac origin Respiratory distress with rales (?cardiac origin)	S-124, S-170 S-129, S-164 S-139, S-169 S-126 S-136	BHPO for: • Chronic pain states • Isolated head injury • Acute onset severe headache • Drug/ETOH intoxication • Multiple trauma with GCS <15 • Suspected active labor • Abdominal/back pain	

APPROVED:

EMS MEDICAL DIRECTOR

ALS MEDICATION LIST 7/1/04

MEDICATION	INDICATIONS	PROTOCOL	COMMENTS	CONTRAINDICATIONS
NARCAN (NALOXONE HYDROCHLORIDE)	Symptomatic ?opioid OD	S-123, S-161, S-134, S-165	BHO if opioid dependent pain management patient	
NORMAL SALINE	Definitive therapy	S-122 S-124, S-170 S-125 S-126 S-127, S-163 S-129, S-164 S-126, S-138 S-139, S-169	Definitive therapy defined as the administration of fluid or medications.	
NITROGLYCERINE (NTG)	Pain or discomfort of ?cardiac origin Respiratory distress with rales	S-126 S-136	BHO if BP<100 systolic Remove during CPR	Suspected intracranial bleed Viagra/Sifenadil/Levitra or other medications for erectile dysfunction within 36 hours.
SODIUM BICARBONATE ($NaHCO_3$)	Pulseless rhythm Tricyclic OD with cardiac effects Hyperkalemia in the hemodialysis patient Crush injury	S-125, S-127 S-134, S-165 S-131 S-139, S-169	BHO for suspected hyperkalemia in the hemodialysis pt.	
VERAPAMIL HYDROCHLORIDE	Uncontrolled A Fib/A Flutter	S-127	*BHPO*	CHF
VERSED (MIDAZOLAM)	Precardioversion External Pacemaker post capture Seizure	S-127, S-163 S-123, S-133, S-161	*BHPO* precardioversion for A Fib/A Flutter	

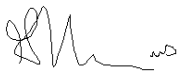
APPROVED:

EMS MEDICAL DIRECTOR

SUBJECT: TREATMENT PROTOCOL -- **Date: 7/1/04**
PEDIATRIC WEIGHT BASED DOSAGE STANDARDS

MEDICATION	DOSE
Adenosine IV fast 1st	0.1 mg/kg
Adenosine IV fast 2nd/3rd	0.2 mg/kg
Albuterol-Nebulized	5 mg (6 ml)
Atrovent-Nebulized	0.05 mg (2.5 ml)
Atropine (Bradycardia) IV/IO	0.02 mg/kg
Atropine (OPP) IV/IM	0.02 mg/kg
Atropine ET	0.04 mg/kg
Benadryl IV/IM	1 mg/kg
Charcoal PO	1 GM/kg
Dextrose 25% IV	0.5 GM/kg (2 ml/kg)
Epinephrine IV / IO (1:10,000)	0.01 mg/kg
Epinephrine ET (1:1,000)	0.1 mg/kg
Epinephrine SQ (1:1,000)	0.01 mg/kg
Epinephrine-Nebulized (1:1,000)	2.5 – 5.0 ml
Glucagon IM	0.05 mg/kg
Lidocaine 2% IV / IO	1 mg/kg
Lidocaine 2% ET	2 mg/kg
Morphine Sulfate IV/IM	0.1 mg/kg
Morphine Sulfate PO	0.3 mg/kg
Narcan IV/DIVP/IM	0.1 mg/kg
Narcan IV titrated increments	0.1 mg/kg
Normal Saline Fluid Bolus	20 ml/kg
Sodium Bicarb IV	1 mEq/kg
Versed IV slow	0.1 mg/kg
Versed IM	0.2 mg/kg

Approved:



Broselow color: PINK

Kg range:	**£7kg**
Approx KG:	**5 kg**
Approximate LBS:	**10 lbs**
ET tube size:	**3.5**

	1st	2nd	3rd
Defib:	**10 J**	**20 J**	**20 J**
Cardiovert:	**5 J**	**10 J**	**20 J**

(or clinically equivalent biphasic energy dose)

MEDICATION	CONCENTRATION	VOL	DOSE
Adenosine **IV 1st**	6 mg/2 ml	0.2 ml	0.5 mg
Adenosine IV **2nd/3rd**	6 mg/2 ml	0.4 ml	1 mg
Albuterol-**Nebulized**	2.5 mg/3 ml	6 ml	5 mg
Atrovent-**Nebulized**	0.05 mg/2.5 ml	2.5 ml	0.05 mg
Atropine (**Bradycardia) IV/IO**	1 mg/10 ml	1 ml	0.1 mg
Atropine **(OPP) IV/IM**	0.4 mg/1 ml	0.3 ml *	0.1 mg
Atropine **ET**	0.4 mg/1 ml	0.5 ml	0.2 mg
Benadryl **IV/IM**	50 mg/1 ml	0.1 ml	5 mg
Charcoal **PO**	50 GM/240 ml	24 ml	5 GM
Dextrose **25% IV**	12.5 GM/50 ml	10 ml	2.5 GM
Epinephrine **IV/IO**	**1:10,000** 1mg/10ml	0.5 ml	0.05 mg
Epinephrine **ET**	**1:1,000** 1mg/1ml	0.5 ml	0.5 mg
Epinephrine **SC**	**1:1,000** 1mg/1ml	0.1 ml *	0.05 mg
Epinephrine-**Nebulized**	**1:1,000** 1mg/1ml	2.5 ml	2.5 mg
Glucagon **IM**	1 unit (mg)/1 ml	0.3 ml *	0.25 mg
Lidocaine **2% IV/IO**	100 mg/5 ml	0.3 ml *	5 mg
Lidocaine **2% ET**	100 mg/5 ml	0.5 ml	10 mg
Morphine Sulfate **IV/IM**	10 mg/1 ml	0.05ml	0.5 mg
Morphine **PO**	10 mg/5 ml	0.8 ml *	1.5 mg
Narcan **IV/DIVP/IM**	1 mg/1 ml	0.5 ml	0.5 mg
Narcan **IV/DIVP/IM titrated increments**	Diluted to 1 mg/10 ml	5 ml	0.5 mg
Normal Saline Fluid Bolus	Standard	100 ml	
Sodium Bicarb **IV**	1 meq/1 ml	5 ml	5 meq
Versed **IV**	5 mg/1 ml	0.1 ml	0.5 mg
Versed **IM**	5 mg/1 ml	0.2 ml	1 mg

- To assure accuracy be sure the designated **concentration** of medication is used.
- All Pediatric ET doses are diluted with NS to achieve minimum volume of 3 ml.
- If infant measures into the newborn (grey) category on the Broselow tape, treat as a pink category.

** volume rounded to nearest 1/10ml for ease of administration*

Approved:

EMS Medical Director

Broselow color: RED

Broselow color: PURPLE

Broselow color: YELLOW

Kg range:	**8-14kg**		
Approx KG:	**10 kg**		
Approximate LBS:	**20 lbs**		
ET tube size:	**3.5(R)**	**4 (P)**	**4.5(Y)**

	1st	2nd	3rd
Defib:	**20 J**	**40 J**	**40 J**
Cardiovert:	**10 J**	**20 J**	**40 J**

(or clinically equivalent biphasic energy dose)

MEDICATION	CONCENTRATION	VOL	DOSE
Adenosine **IV fast 1st**	6 mg/2 ml	0.3 ml *	1mg
Adenosine **IV fast 2nd/3rd**	6 mg/2 ml	0.7 ml *	2 mg
Albuterol-**Nebulized**	2.5 mg/3 ml	6 ml	5 mg
Atrovent-**Nebulized**	0.05 mg/2.5 ml	2.5 ml	0.05 mg
Atropine **(Bradycardia) IV/IO**	1 mg/10 ml	0.2 ml	0.2 mg
Atropine **(OPP) IV/IM**	0.4 mg/1 ml	0.5 ml	0.2 mg
Atropine **ET**	0.4 mg/1 ml	1 ml	0.4 mg
Benadryl **IV/IM**	50 mg/1 ml	0.2 ml	10 mg
Charcoal **PO**	50 GM/240 ml	50 ml *	10 GM
Dextrose **IV 25%**	12.5 GM/50 ml	20 ml	5 GM
Epinephrine **IV/IO**	**1:10,000** 1mg/10ml	1 ml	0.1 mg
Epinephrine **ET**	**1:1,000** 1mg/1ml	1 ml	1 mg
Epinephrine **SQ**	**1:1,000** 1mg/1ml	0.1 ml	0.1 mg
Epinephrine-**Nebulized**	**1:1,000** 1mg/1ml	2.5 ml	2.5 mg
Glucagon **IM**	1 unit (mg)/1 ml	0.5 ml	0.5 mg
Lidocaine **2% IV/IO**	100 mg/5 ml	0.5 ml	10 mg
Lidocaine **2% ET**	100 mg/5 ml	1 ml	20 mg
Morphine Sulfate **IV/IM**	10 mg/1 ml	0.1 ml	1 mg
Morphine Sulfate **PO**	10 mg/5 ml	1.5 ml	3 mg
Narcan **IV/DIVP/IM**	1 mg/1 ml	1 ml	1 mg
Narcan **IV/DIVP/IM titrated increments**	Diluted to 1 mg/10 ml	10 ml	1 mg
Normal Saline Fluid Bolus	Standard	200 ml	
Sodium Bicarb **IV**	1 meq/1 ml	10 ml	10 mEq
Versed **IV**	5 mg/1 ml	0.2 ml	1 mg
Versed **IM**	5 mg/1 ml	0.4 ml	2 mg

- To assure accuracy be sure the designated **concentration** of the medication is used.
- All pediatric ET doses are diluted with NS to achieve a minimum of 3 ml.

** volume rounded to nearest 1/10ml for ease of administration*

Approved:

EMS Medical Director

Broselow color: WHITE

Kg range:	**15-18kg**
Approx KG:	**15 kg**
Approximate LBS:	**30 lbs**
ET tube size:	**5**

	1st	2nd	3rd
Defib:	**30 J**	**60 J**	**60 J**
Cardiovert:	**15 J**	**30 J**	**60 J**

(or clinically equivalent biphasic energy dose)

MEDICATION	CONCENTRATION	VOL	DOSE
Adenosine **IV fast 1st**	6 mg/2 ml	0.5 ml	1.5 mg
Adenosine **IV fast 2nd/3rd**	6 mg/2 ml	1 ml	3 mg
Albuterol-**Nebulized**	2.5 mg/3 ml	6 ml	5 mg
Atrovent-**Nebulized**	0.05 mg/2.5 ml	2.5 ml	0.05 mg
Atropine **(Bradycardia) IV/IO**	1 mg/10 ml	3 ml	0.3 mg
Atropine **(OPP) IV/IM**	0.4 mg/1 ml	0.8 ml	0.3 mg
Atropine **ET**	0.4 mg/1 ml	1.5 ml	0.6 mg
Benadryl **IV/IM**	50 mg/1 ml	0.3 ml	15 mg
Charcoal **PO**	50 GM/240 ml	70 ml *	15 GM
Dextrose **25% IV**	12.5 GM/50 ml	30 ml	7.5 GM
Epinephrine **IV/IO**	**1:10,000** 1mg/10ml	1.5 ml	0.15 mg
Epinephrine **ET**	**1:1,000** 1mg/1ml	1.5 ml	1.5 mg
Epinephrine **SQ**	**1:1,000** 1mg/1ml	0.2 ml *	0.15 mg
Epinephrine **Nebulized**	**1:1,000** 1mg/1ml	2.5 ml	2.5 mg
Glucagon **IM**	1 unit (mg)/1 ml	0.8 ml *	0.75 mg
Lidocaine **2% IV slow/IO**	100 mg/5 ml	0.8 ml *	15 mg
Lidocaine **2% ET**	100 mg/5 ml	1.5 ml	30 mg
Morphine Sulfate **IV/IM**	10 mg/1 ml	0.2 ml *	1.5 mg
Morphine Sulfate **PO**	10 mg/5 ml	2.3 ml *	4.5 mg
Narcan **IV/DIVP/IM**	1 mg/1 ml	1.5 ml	1.5 mg
Narcan **IV/DIVP/IM titrated increments**	Diluted to 1 mg/10 ml	15 ml	1.5 mg
Normal Saline Fluid Bolus	Standard	300 ml	
Sodium Bicarb **IV**	1 meq/1 ml	15 ml	15 mEq
Versed **IV slow**	5 mg/1 ml	0.3 ml	1.5 mg
Versed **IM**	5 mg/1 ml	0.6 ml	3 mg

- To assure accuracy be sure the designated **concentration** of the medication is used.
- All pediatric ET doses are diluted with NS to achieve a minimum of 3 ml.

* *volume rounded to nearest 1/10ml for ease of administration*

Approved:

EMS Medical Director

Broselow color: BLUE

Kg range:	**19-22kg**
Approx KG:	**20 kg**
Approximate LBS:	**40 lbs**
ET tube size:	**5.5**

	1st	2nd	3rd
Defib:	**40 J**	**80 J**	**80 J**
Cardiovert:	**20 J**	**40 J**	**80 J**

(or clinically equivalent biphasic energy dose)

MEDICATION	CONCENTRATION	VOL	DOSE
Adenosine **IV fast 1st**	6 mg/2 ml	0.7 ml *	2 mg
Adenosine **IV fast 2nd/3rd**	6 mg/2 ml	1.3 ml *	4 mg
Albuterol-**Nebulized**	2.5 mg/3 ml	6 ml	5 mg
Atrovent-**Nebulized**	0.05 mg/2.5 ml	2.5 ml	0.05 mg
Atropine **(Bradycardia) IV/IO**	1 mg/10 ml	4 ml	0.4 mg
Atropine **(OPP) IV/IM**	0.4 mg/1 ml	1 ml	0.4 mg
Atropine **ET**	0.4 mg/1 ml	2 ml	0.8 mg
Benadryl **IV/IM**	50 mg/1 ml	0.4 ml	20 mg
Charcoal **PO**	50 GM/240 ml	100 ml *	20 GM
Dextrose **25% IV**	12.5 GM/50 ml	40 ml	10 GM
Epinephrine **IV/IO**	**1:10,000** 1mg/10ml	2 ml	0.2 mg
Epinephrine **ET**	**1:1,000** 1mg/1ml	2 ml	2 mg
Epinephrine **SQ**	**1:1,000** 1mg/1ml	0.2 ml	0.2 mg
Epinephrine **Nebulized**	**1:1,000** 1mg/1ml	5 ml	5 mg
Glucagon **IM**	1 unit (mg)/1 ml	1 ml	1 mg
Lidocaine **2% IV slow/IO**	100 mg/5 ml	1 ml	20 mg
Lidocaine **2% ET**	100 mg/5 ml	2 ml	40 mg
Morphine Sulfate **IV/IM**	10 mg/1 ml	0.2 ml	2 mg
Morphine Sulfate **PO**	10 mg/5 ml	3 ml	6 mg
Narcan **IV/DIVP/IM**	1 mg/1 ml	2 ml	2 mg *(a)*
Narcan **IV/DIVP/IM titrated increments**	Diluted to 1 mg/10 ml	20 ml	2 mg *(a)*
Normal Saline Fluid Bolus	Standard	400 ml	
Sodium Bicarb **IV**	1 meq/1 ml	20 ml	20 mEq
Versed **IV slow**	5 mg/1 ml	0.4 ml	2 mg
Versed **IM**	5 mg/1 ml	0.8 ml	4 mg

- To assure accuracy be sure the designated **concentration** of the medication is used.
- All pediatric ET doses are diluted with NS to achieve a minimum of 3 ml.

* *volume rounded to nearest 1/10ml for ease of administration*

(a) dose max – 'adult' dose

Approved:

EMS Medical Director

Broselow color: ORANGE

Kg range:	**23-30 kg**
Approx KG:	**25 kg**
Approximate LBS:	**50 lbs**
ET tube size:	**6**

	1st	2nd	3rd
Defib:	**50 J**	**100 J**	**100 J**
Cardiovert:	**25 J**	**50 J**	**100 J**

(or clinically equivalent biphasic energy dose)

MEDICATION	CONCENTRATION	VOL	DOSE
Adenosine **IV fast 1st**	6 mg/2 ml	0.8 ml *	2.5 mg
Adenosine **IV fast 2nd/3rd**	6 mg/2 ml	1.7 ml *	5 mg
Albuterol-**Nebulized**	2.5 mg/3 ml	6 ml	5 mg
Atrovent-**Nebulized**	0.05 mg/2.5 ml	2.5 ml	0.05 mg
Atropine **(Bradycardia) IV/IO**	1 mg/10 ml	5 ml	0.5 mg
Atropine **(OPP) IV/IM**	0.4 mg/1 ml	1.3 ml *	0.5 mg
Atropine **ET**	0.4 mg/1 ml	2.5 ml	1 mg
Benadryl **IV/IM**	50 mg/1 ml	0.5 ml	25 mg
Charcoal **PO**	50 GM/240 ml	120 ml	25 GM
Dextrose **25% IV**	12.5 GM/50 ml	50 ml	12.5 GM
Epinephrine **IV/IO**	**1:10,000** 1mg/10ml	2.5 ml	0.25 mg
Epinephrine **ET**	**1:1,000** 1mg/1ml	2.5 ml	2.5 mg
Epinephrine **SQ**	**1:1,000** 1mg/1ml	0.25 ml	0.25 mg
Epinephrine **Nebulized**	**1:1,000** 1mg/1ml	5 ml	5 mg
Glucagon **IM**	1 unit (mg)/1 ml	1 ml	1 mg *(a)*
Lidocaine **2% IV slow/IO**	100 mg/5 ml	1.3 ml *	25 mg
Lidocaine **2% ET**	100 mg/5 ml	2.5 ml	50 mg
Morphine Sulfate **IV/IM**	10 mg/1 ml	0.3 ml *	2.5 mg
Morphine Sulfate **PO**	10 mg/5 ml	3.8 ml *	7.5 mg
Narcan **IV/DIVP/IM**	1 mg/1 ml	2 ml	2 mg *(a)*
Narcan **IV/DIVP/IM titrated increments**	Diluted to 1 mg/10 ml	20 ml	2 mg *(a)*
Normal Saline Fluid Bolus	Standard	500 ml	*(a)*
Sodium Bicarb **IV**	1 meq/1 ml	25 ml	25 mEq
Versed **IV slow**	5 mg/1 ml	0.5 ml	2.5 mg
Versed **IM**	5 mg/1 ml	1 ml	5 mg

- To assure accuracy be sure the designated **concentration** of medication is used.
- All pediatric ET doses are diluted with NS to achieve a minimum volume of 3 ml.

* *volume rounded to nearest 1/10ml for ease of administration*

(a) dose max – 'adult' dose

Approved:

EMS Medical Director

Broselow color: GREEN

Kg range:	**31-49kg**
Approx KG:	**35 kg**
Approximate LBS:	**70 lbs**
ET tube size:	**6.5**

	1st	2nd	3rd
Defib:	**70 J**	**140 J**	**140 J**
Cardiovert:	**35 J**	**70 J**	**140 J**

(or clinically equivalent biphasic energy dose)

MEDICATION	CONCENTRATION	VOL	DOSE
Adenosine **IV fast 1st**	6 mg/2 ml	1.2 ml *	3.5 mg
Adenosine **IV fast 2nd/3rd**	6 mg/2 ml	2.3 ml *	7 mg
Albuterol-**Nebulized**	2.5 mg/3 ml	6 ml	5 mg
Atrovent-**Nebulized**	0.05 mg/2.5 ml	2.5 ml	0.05 mg
Atropine **(Bradycardia) IV/IO**	1 mg/10 ml	7 ml	0.7 mg
Atropine **(OPP) IV/IM**	0.4 mg/1 ml	1.8 ml *	0.7 mg
Atropine **ET**	0.4 mg/1 ml	3.5 ml	1.4 mg
Benadryl **IV/IM**	50 mg/1 ml	0.7 ml	35 mg
Charcoal **PO**	50 GM/240 ml	170 ml *	35 GM
Dextrose **25% IV**	12.5 GM/50 ml	70 ml	17.5 GM
Epinephrine **IV/IO**	**1:10,000** 1mg/10ml	3.5 ml	0.35 mg
Epinephrine **ET**	**1:1,000** 1mg/1ml	3.5 ml	3.5 mg
Epinephrine **SQ**	**1:1,000** 1mg/1ml	0.3 ml	0.3 mg *(a)*
Epinephrine **Nebulized**	**1:1,000** 1mg/1ml	5 ml	5 mg
Glucagon **IM**	1 unit (mg)/1 ml	1 ml	1 mg *(a)*
Lidocaine **2% IV slow/IO**	100 mg/5 ml	1.8 ml *	35 mg
Lidocaine **2% ET**	100 mg/5 ml	3.5 ml	70 mg
Morphine Sulfate **IV/IM**	10 mg/1 ml	0.4 ml	3.5 mg
Morphine Sulfate **PO**	10 mg/5 ml	5 ml	10 mg *(a)*
Narcan **IV/DIVP/IM**	1 mg/1 ml	2 ml	2 mg *(a)*
Narcan **IV/DIVP/IM titrated increments**	Diluted to 1 mg/10 ml	20 ml	2 mg *(a)*
Normal Saline Fluid Bolus	Standard	500	*(a)*
Sodium Bicarb **IV**	1 meq/1 ml	35 ml	35 mEq
Versed **IV slow**	5 mg/1 ml	0.7 ml	3.5 mg
Versed **IM**	5 mg/1 ml	1.4 ml	7 mg

- To assure accuracy be sure the designated **concentration** of the medication is used.
- All pediatric ET doses are diluted with NS to achieve a minimum volume of 3 ml.

** volume rounded to nearest 1/10ml for ease of administration*

(a) dose max – 'adult' dose

Approved:

EMS Medical Director

SUBJECT: TREATMENT PROTOCOL –ABDOMINAL PAIN (NON-TRAUMATIC) **Date: 7/1/04**

BLS	ALS
Ensure patent airway O_2 and/or ventilate prn NPO Anticipate vomiting	Monitor EKG/ O2 Saturation prn IV SO adjust prn For suspected intra-abdominal catastrophe or ?aortic aneurysm: IV 500 ml bolus for BP<90 systolic SO. MR to maintain BP 90 systolic SO Consider transport to facility with surgical resources immediately available

Approved:

EMS Medical Director

SUBJECT: TREATMENT PROTOCOL -- AIRWAY OBSTRUCTION (Foreign Body) **Date: 7/1/04**

BLS	ALS
For a conscious patient: Reassure, encourage coughing O_2 prn Abdominal thrusts. (Chest thrusts in obesity/pregnancy) If patient becomes unconscious: Abdominal thrusts. MR prn If patient is unconscious when found: Attempt to ventilate. (Reposition prn) Abdominal thrusts prn Once obstruction is removed: High flow O_2, ventilate prn	**If patient becomes unconscious or has a decreasing LOC**: Direct laryngoscopy and Magill forceps SO. MR prn **Once obstruction is removed:** Monitor EKG/O_2 Saturation prn IV SO adjust prn

Note: If unable to secure airway, transport STAT while continuing abdominal thrusts.

Approved:

EMS Medical Director

SUBJECT: TREATMENT PROTOCOL -- ALLERGIC REACTION/ANAPHYLAXIS **Date: 7/1/04**

BLS	ALS
Ensure patent airway 0_2 and/or ventilate prn Remove sting/injection mechanism May assist patient to self medicate own prescribed medication **ONE TIME ONLY**. Base Hospital contact required prior to any repeat dose. **Latex Sensitive Patients** Should be managed in a latex safe environment without compromising patient care. Prehospital personnel should inform the receiving facility personnel at the time of transfer if they become aware that the patient is latex sensitive. See Management of Latex Sensitive Patients (Equipment List) S-105	Monitor EKG/ O_2 Saturation prn IV SO adjust prn Benadryl 50mg slow IVP/IM SO **Any** respiratory distress with bronchospasm: Albuterol 6ml 0.083% via nebulizer SO. MR SO Atrovent 2.5ml 0.02% added to first dose of Albuterol via nebulizer SO **Severe** respiratory distress with bronchospasm **OR** **Exposure** to known allergen with previous severe reaction and onset of any allergic symptoms (e.g. urticaria, swelling etc.): ***If no known cardiac history and < 55yo:*** Epinephrine 1:1,000 0.3mg SC per SO. MR q10"x 2 (total of 3 doses) SO ***If KNOWN cardiac history and/or ≥ 55yo:*** Epinephrine 1:1,000 0.3mg SC per BHO. MR q10" x 2 (total of 3 doses) BHO **Anaphylaxis (shock or cyanosis):** Epinephrine 1:1,000 0.3 mg SC per SO. MR q10" x2 (total of 3 doses) SO IV wide-open SO Epinephrine 1:10,000 0.1mg IVP per BHO. MR x 2 BHO **OR** Epinephrine 1:1,000 2mg ET per BHO. MR BHO. Dopamine 400mg/250ml @ 5-40 mcg/kg/min IV drip. Titrate BP=100-120 systolic BHO

Approved:

EMS Medical Director

SUBJECT: TREATMENT PROTOCOL -- **Date: 7/1/04**
ALTERED NEUROLOGIC FUNCTION (NON TRAUMATIC)

BLS	ALS
Ensure patent airway, 0_2 and/or ventilate prn Spinal immobilization prn Secretion problems, position on affected side Do not allow patient to walk Restrain prn **Hypoglycemia (suspected) or known to be <75mg/dl:** If patient is awake and has gag reflex, give oral glucose tabs or paste. Patient may eat or drink if able. If patient is unconscious, NPO **CVA/Stroke:** For suspected stroke with major deficit with onset of symptoms known to be <2 hours in duration, expedite transport. Make initial notification early to confirm destination. Use the Prehospital Stroke Scale in the assessment of possible CVA patients (facial droop, arm drift and speech abnormalities). **Seizures:** Protect airway, and protect from injury Treat associated injuries **Behavioral Emergencies (S-422):** Restrain only if necessary to prevent injury, report & document distal neurovascular status q15" Avoid unnecessary sirens Consider law enforcement support	Monitor EKG/ O_2 Saturation prn IV SO adjust prn Monitor blood glucose prn SO **Symptomatic ?opioids OD (*excluding opioid dependent pain management patients):*** Narcan 2mg IVP/direct IVP/IM SO. MR SO If patient refuses transport, give additional Narcan 2 mg IM SO **Symptomatic ?opioids OD in opioid dependent pain management patients:** Narcan titrate 0.1mg increments up to 2mg IVP/direct IVP or IM BHO. MR BHO **Hypoglycemia:** Symptomatic **known** diabetic unresponsive to oral glucose agents: D_{50} 25Gm IVP SO if BS <75mg/dl or BS unobtainable. MR BHO **If no IV**: Glucagon 1ml IM SO if BS < 75 mg/dl or unobtainable Symptomatic **unknown** diabetic unresponsive to oral glucose agents: D_{50} 25Gm IVP SO if BS <75mg/dl. MR BHO D_{50} 25Gm IVP BHO if BS unobtainable **If no IV**: Glucagon 1 ml IM SO if BS <75mg/dl Glucagon 1 ml IM BHO if BS unobtainable **Seizures:** For: A. Ongoing generalized seizure lasting ≥5" SO B. Focal seizure with respiratory compromise SO C. Recurrent seizures without lucid interval SO D. Eclamptic seizure of any duration SO Give: Versed 0.1mg/kg slow IVP SO to a max dose of 5mg (d/c if seizure stops) SO. MR x1 in 10" SO **If no IV:** Versed 0.2mg/kg IM SO to a max dose 10mg. MR x1 in 10" SO For: Prolonged focal seizures without respiratory compromise Give: Versed 0.1mg/kg slow IVP to a max dose of 5mg (d/c if seizure stops) BHO. MR x1 in 10" BHO **If no IV**: Versed 0.2mg/kg IM to a max dose 10mg BHO. MR x1 in 10" BHO

Approved:

EMS Medical Director

SUBJECT: TREATMENT PROTOCOL -- BURNS **Date: 7/1/04**

BLS	ALS
Move to a safe environment Break contact with causative agent Ensure patent airway, O_2 and/or ventilate prn Treat other life threatening injuries **Thermal burns:** Burns of < 10% body surface area, cool with non-chilled water or saline For burns ≥ 10% body surface area, cover with dry dressing and keep warm Do not allow the patient to become hypothermic **Chemical burns:** Flush with copious water Brush off dry chemicals **Tar burns:** Cool with water, transport; do not remove tar	Monitor EKG/ O_2 Saturation prn IV SO adjust prn Treat pain as per Pain Management Protocol (S-141) **For patients with ≥20% 2nd or ≥5% 3rd degree burns and ≥15 yo:** IV 500 ml in the first hour SO **In the presence of respiratory distress with bronchospasm:** Albuterol 6ml 0.083% via nebulizer SO. MR SO Atrovent 2.5ml 0.02% via nebulizer SO added to first dose of Albuterol

Note: Base Hospital Contact and Transport (Per S-415):
Will be made to UCSD Base Hospital for patients meeting burn center criteria.

BURN CENTER CRITERIA
Patients with burns involving:
- ≥ 20% 2nd or ≥ 5% 3rd degree of BSA
- suspected respiratory involvement or significant smoke inhalation in a confined space
- significant injury of the face, hands, feet or perineum or circumferential
- significant electrical injury due to high voltage (greater than 110 volts)

Disposition:
Hyperbaric chamber for suspected CO poisoning.

Approved:

EMS Medical Director

SUBJECT: TREATMENT PROTOCOL -- **Date: 7/1/04**
CARDIAC ARREST UNMONITORED (NON TRAUMATIC)

BLS	ALS
Ensure patent airway Ventilate In addition to NTG patches, remove chest transdermal medication patches prior to defibrillation CPR AED if available, may use	**When no monitor available:** Consider early Base Hospital contact for disposition/pronouncement at scene Precordial thump for witnessed arrest SO Defibrillate x3 prn SO Intubate SO IV SO adjust prn NG prn SO Epinephrine 1:10,000 1mg IVP. MR x2 in 3-5" SO. MR q3-5" BHO **OR** Epinephrine 1:1,000 2mg ET. MR x2 in 3-5" SO. MR q3-5" BHO **OR** Epinephrine 1:1,000 10mg (diluted to 20ml) ETAD - esophageal placement via port 1 (blue). MR x2 q5" SO. MR q5" BHO Defibrillate SO Consider $NaHCO_3$ 1mEq/kg IVP BHO. MR 0.5mEq/kg IVP q10" BHO Defibrillate SO

Approved:

EMS Medical Director

SUBJECT: TREATMENT PROTOCOL -- **Date: 7/1/04**
DISCOMFORT/PAIN OF SUSPECTED CARDIAC ORIGIN

BLS	ALS
Ensure patent airway 0_2 and/or ventilate prn. Do not allow patient to walk If BP ≥ 100 systolic, may assist patient to self medicate own prescribed medication **ONE TIME ONLY**. Base Hospital contact required prior to any repeat dose.	Monitor EKG/ O_2 Saturation prn IV SO adjust prn ASA 162mg chewable PO SO **If BP ≥ 100 systolic**: NTG 0.4mg SL SO. MR x2 q3-5" SO. MR q3-5" BHO NTG ointment 1" SO If NTG x 3 SO ineffective or contraindicated: MS 2-4 mg IVP SO. MR to max of 10mg SO. MR to max of 20 mg BHO **If BP < 100 systolic**: NTG 0.4mg SL BHO. MR *BHPO* MS 2-4mg IVP BHO. MR to max of 20mg BHO **Discomfort/Pain of ? Cardiac Origin with Associated Shock:** IV fluid bolus 250 ml with clear lungs SO. MR to maintain BP of 90 systolic SO Dopamine 400mg/250ml @ 5-40mcg/kg/min IV, titrate BP=100-120 systolic BHO

Note: If pain relieved with NTG SL (prior to arrival or EMS administered), continue treatment with NTG ointment and ASA. ASA should be given regardless of prior daily dose(s).
If any patient has taken Viagra/Sifenadil/Levitra or other medications for erectile dysfunction within 36 hours, NTG is contraindicated.

Approved:

EMS Medical Director

SUBJECT: TREATMENT PROTOCOL -- DYSRHYTHMIAS **Date: 7/1/04**

Treat dysrhythmias ONLY if they have potential to or are causing symptoms of decreased cardiac output.

BLS	ALS
O_2 and/or ventilate prn	Monitor EKG/ O_2 Saturation prn IV SO, adjust prn A. **Unstable Bradycardia with Pulse (BP<90 systolic and chest pain, dyspnea or altered LOC):** If bradycardia is severe and patient is unconscious, begin chest compressions Atropine 0.5mg IVP for pulse <60 bpm, SO. MR 0.5-1mg IVP q 3-5' to max of 3mg SO **OR** Atropine 1mg ET for pulse <60 bpm SO. MR 1-2mg ET q 3-5" to max of 6mg administered dose SO **If rhythm refractory to Atropine:** External cardiac pacemaker, if available, may use *BHPO* If capture occurs sedate with Versed 1-5 mg IVP *BHPO* Dopamine 400mg/250ml at 5-40mcg/kg/min IV, titrate to BP=100-120 systolic (after max Atropine) BHO B. **Supraventricular Tachycardia (SVT):** VSM SO. MR SO Adenosine 6mg rapid IVP, followed with 20ml NS IVP SO (Patients with history of bronchospasm or COPD BHO If no sinus pause: Adenosine 12mg rapid IVP followed with 20ml NS IVP SO. If no sinus pause, MR x1 in 1-2" SO **If patient unstable with severe symptoms OR rhythm refractory to treatment:** **Conscious (BP<90 systolic and chest pain, dyspnea or altered LOC):** Versed 1-5 mg slow IVP prn precardioversion BHO If age ≥ 60 consider lower dose with attention to age and hydration status Synchronized cardioversion at 100 J (or clinically equivalent biphasic energy dose) BHO MR at 200, 300, 360 J (or clinically equivalent biphasic energy dose) BHO **Unconscious**: Synchronized cardioversion at 100 J (or clinically equivalent biphasic energy dose) SO MR at 200, 300, 360 J (or clinically equivalent biphasic energy dose) SO. MR BHO

Approved:

EMS Medical Director

Treat dysrhythmias ONLY if they have potential to or are causing symptoms of decreased cardiac output.

BLS	**ALS**
O_2 and/or ventilate prn	C. **Uncontrolled Atrial Fibrillation/ Atrial Flutter:** In the presence of symptomatic uncontrolled ventricular response with rate ≥ 180 **Consider** Verapamil 5mg slow IVP *BHPO*. MR *BHPO* **If rhythm refractory to treatment or symptoms are severe:** Versed 1-5 mg slow IVP prn pre-cardioversion *BHPO* If age ≥ 60 consider lower dose with attention to age and hydration status Synchronized cardioversion at 100 J (or clinically equivalent biphasic energy dose) *BHPO* MR at 200, 300, 360 J (or clinically equivalent biphasic energy dose) *BHPO* **Unconscious and BP< 90 systolic**: Synchronized cardioversion at 100 J (or clinically equivalent biphasic energy dose) SO. MR at 200, 300, 360 J (or clinically equivalent biphasic energy) SO. MR BHO D. **Ventricular Tachycardia (VT):** Precordial thump for witnessed onset SO Lidocaine 1.5 mg/kg slow IVP SO. MR at 0.5mg/kg slow IVP q8-10" to a max of 3mg/kg (including initial bolus) SO **OR** Lidocaine 3mg/kg ET SO. MR at 1mg/kg q 8-10" not to exceed 6 mg/kg administered dose (including initial bolus) SO **If patient unstable with severe symptoms OR rhythm refractory to treatment:** **Conscious (BP<90 systolic and chest pain, dyspnea or altered LOC):** Versed 1-5 mg slow IVP prn pre-cardioversion SO If age ≥ 60 consider lower dose with attention to age and hydration status Synchronized cardioversion at 100 J (or clinically equivalent biphasic energy dose) SO. MR at 200, 300, 360 J (or clinically equivalent biphasic energy dose) SO. MR BHO **Unconscious**: Synchronized cardioversion at 100 J (or clinically equivalent biphasic energy dose) SO. MR at 200, 300, 360 J (or clinically equivalent biphasic energy dose) SO. MR BHO

Approved:

EMS Medical Director

Treat dysrhythmias ONLY if they have potential to or are causing symptoms of decreased cardiac output.

BLS	ALS
(?conscious/ pulseless): CPR AED if available, may use Assist ventilation	E. **VF/ Pulseless VT:** Precordial thump for witnessed onset Defibrillate x3 prn SO Intubate SO NG prn SO Epinephrine 1:10,000 1mg IVP, MR x2 in 3-5" SO. MR q3- 5" BHO **OR** Epinephrine 1:1,000 2mg ET, MR x2 in 3-5"SO. MR q3-5" BHO **OR** Epinephrine 1:1000 10mg (dilute to 20ml) ETAD - esophageal placement via port 1 (blue) MR x2 q5" SO. MR q5"BHO Lidocaine 1.5mg/kg IVP. MRx1 in 3-5" SO **OR** Lidocaine 3mg/kg ET. MR x1 in 3-5" SO $NaHCO_3$ 1mEq/kg IVP BHO. MR 0.5mEq/kg IVP q10" BHO F. **Post conversion VT/VF with pulse ≥ 60 (including witnessed spontaneous conversion, precordial thump, AED & AICD). If initial dose already given, continue with repeat doses as appropriate.** Lidocaine 1.5mg/kg IVP SO. MR at 0.5mg/kg IVP q8-10", to a max of 3mg/kg (including initial bolus) SO **OR** Lidocaine 3mg/kg ET SO. MR at 1mg/kg q 8-10" not to exceed 6 mg/kg administered dose (including initial bolus) SO

Note: For patients in nonperfusing rhythms:

- Consider early Base Hospital contact for disposition/pronouncement at scene
- Flush line after medication administration

Approved:

EMS Medical Director

Treat dysrhythmias ONLY if they have potential to or are causing symptoms of decreased cardiac output.

BLS	ALS
CPR Assist ventilation	G. **Pulseless Electrical Activity (PEA):** Intubate SO NG prn SO **? Hypovolemia:** IV wide open SO Epinephrine 1:10,000 1mg IVP. MR x2 in 3-5" SO. MR q3-5" BHO **OR** Epinephrine 1:1,000 2mg ET. MR x2 in 3-5" SO. MR q3-5" BHO **OR** Epinephrine 1:1000 10mg (dilute to 20ml) ETAD - esophageal placement via port 1 (blue). MR x2 q5" SO. MR q5" BHO **For HR<60/min:** Atropine 1mg IVP. MR x2 q 3-5"to max 3mg SO **OR** Atropine 2mg ET. MR x 2 q 3-5" to max 6mg administered dose SO $NaHCO_3$ 1mEq/kg IVP BHO. MR 0.5 mEq/kg IVP q10" BHO Pronouncement at scene *BHPO* H. **Asystole (consider early Base Hospital contact for disposition/pronouncement at scene).** Intubate SO NG prn SO Epinephrine 1:10,000 1mg IVP, MR x 2 in 3-5" SO. MR BHO **OR** Epinephrine 1:1000 2mg ET, MR x 2 in q3-5" SO. MR BHO **OR** Epinephrine 1:1000 10mg (dilute to 20ml) ETAD - esophageal placement via port 1 (blue). MR x2 q5" SO. MR q5" BHO Atropine 1mg IVP. MR x 2 q3-5" SO to a max of 3mg **OR** Atropine 2mg ET. MR x 2 q3-5" SO to a max of 6mg administered dose Consider $NaHCO_3$ 1mEq/kg IVP BHO. MR 0.5 mEq/kg IVP q10" BHO Pronouncement at scene *BHPO* Transport *BHPO*

Note: For patients in nonperfusing rhythms:

- Consider early Base Hospital contact for disposition/pronouncement at scene
- Flush line after medication administration

Approved:

EMS Medical Director

SUBJECT: TREATMENT PROTOCOL -- ENVENOMATION INJURIES **Date: 7/1/04**

BLS	ALS
O_2 and/or ventilate prn. **Jellyfish sting:** Rinse with alcohol; do not rub or apply pressure **Stingray or Sculpin injury:** Heat as tolerated **Snakebites:** Mark proximal extent of swelling Keep involved extremity at heart level and immobile	IV SQ adjust prn Treat pain as per Pain Management Protocol (S-141)

Approved:

EMS Medical Director

SUBJECT: TREATMENT PROTOCOL – ENVIRONMENTAL EXPOSURE **Date: 7/1/04**

BLS	ALS
Ensure patent airway 0_2 and/or ventilate prn Remove excess/wet clothing **Heat Exhaustion:** Cool gradually Fanning, sponging with tepid water Avoid shivering If conscious, give small amounts of fluids **Heat Stroke:** Rapid cooling Ice packs to carotids, femorals and axillae Sponge with tepid water Fan, avoid shivering **Cold Exposure:** Gentle warming Blankets, warm packs -not to exceed 110 F Dry dressings Avoid unnecessary movement or rubbing If alert, give warm liquids If severe, NPO Prolonged CPR may be indicated	Monitor EKG/O2 Saturation prn IV SQ adjust prn **Severe Hypothermia with Cardiac Arrest:** Hold medications Continue CPR If defibrillation needed, limit to 3 shocks maximum Transport

Note: Consider fluid resuscitation in young healthy adults in high heat/high exertion situations even if BP Is within normal limits.

Approved:

EMS Medical Director

SUBJECT: TREATMENT PROTOCOL -- HEMODIALYSIS PATIENT **Date: 7/1/04**

BLS	ALS
Ensure patent airway, give O_2, ventilate if necessary	Monitor EKG/O_2 Saturation prn **FOR DEFINITIVE THERAPY ONLY:** IV access in arm that does not have graft/AV fistula SQ. Adjust prn **If Unable:** Access Percutaneous Vas Catheter SQ if present (aspirate 5 ml PRIOR to infusion) **OR** Access graft/AV fistula SQ **Suspected Hyperkalemia (widened QRS complex and peaked T-waves):** $NaHCO_3$ 1mEq/kg IV push x1 BHO $CaCl_2$ 500mg IVP per BHO. MR BHO For fluid overload with rales treat as per S-136

Note: Consider patient's hospital of choice for transport.
Vas Cath contains concentrated dose of Heparin which must be aspirated PRIOR to infusion.

Approved:

EMS Medical Director

SAN DIEGO COUNTY DIVISION OF EMERGENCY MEDICAL SERVICES **No. S-132**
POLICY/PROCEDURE/PROTOCOL **Page: 1 of 1**

SUBJECT: TREATMENT PROTOCOL -- **Date: 7/1/04**
NEAR DROWNING/DIVING RELATED INCIDENTS

BLS	ALS
100% O_2, and/or ventilate prn Spinal immobilization when indicated	Monitor EKG/ O_2 Saturation prn IV SO adjust prn

Diving Victims: Any victim who has breathed sources of compressed air below the water's surface and presents with the following:

Minor presentation: minimal localized joint pain, mottling of the skin surface, localized swelling with pain; none of which are progressive.

Major presentation: symptoms listed above that are severe and/or rapidly progressing, vertigo, altered LOC, progressive paresthesia, paralysis, severe SOB, blurred vision, crepitus, hematemesis, hemoptysis, pneumothorax, trunk pain, or girdle or band-like burning discomfort.

Disposition of Diving Victims:

Major presentation:

All patients with a "major" presentation should be transported to UCSD-Hillcrest
Trauma issues are secondary in the presence of a "Major" presentation
If the airway is unmanageable, divert to the closest BEF

Minor presentation:

Major trauma candidate: catchment trauma center
Non-military patients: routine
Active Duty Military Personnel: transport to the Military Duty Recompression Chamber if possible. The Base Hospital will contact the Duty Recompression Chamber at (619) 556-7130 to determine chamber location. Paramedics/Base Hospital shall transfer care to Diving Medical Officer (or designee) upon arrival to chamber. Hyperbaric treatment may begin in accordance with military medical protocols.

Naval Hyperbaric Chamber Locations:
North Island Naval Air Station
Naval Station 32nd Street and Harbor Drive
Naval Special Warfare - Coronado

Note: If possible, obtain dive computer or records.
Hyperbaric Chambers must be capable of recompression to 165 ft.

Approved:

EMS Medical Director

SUBJECT: TREATMENT PROTOCOL -- OBSTETRICAL EMERGENCIES **Date: 7/1/04**

BLS	ALS
MOTHER: Ensure patent airway. O_2, ventilate prn If no time for transport and delivery is imminent (crowning and pushing), proceed with delivery If no delivery, transport on left side **Routine Delivery:** Massage fundus if placenta delivered (Do not wait on scene) **Post Partum Hemorrhage:** Massage fundus vigorously Baby to breast Trendelenburg position **Eclampsia (seizures):** Protect airway, and protect from injury Spinal immobilization when indicated STAT transport for third trimester bleeding	MOTHER: IV SO adjust prn Direct to Labor/Delivery area per BHO if ≥ 20 weeks gestation. **Eclampsia (seizures):** Versed 0.1mg/kg slow IVP to a max dose of 5mg (d/c if seizure stops) SO. MR x1 in 10" SO **If no IV** Versed 0.2mg/kg IM to a max dose of 10 mg SO. MR x1 in 10" SO

Note: If time allows, place identification bands on mother and infant.

Approved:

EMS Medical Director

SUBJECT: TREATMENT PROTOCOL -- POISONING/OVERDOSE **Date: 7/1//04**

BLS	ALS
Ensure patent airway. O_2 and/or ventilate prn **Ingestions:** Identify substance Consider transport on LEFT side for ingestions **Skin:** Remove clothes and brush off, or rinse substance with copious amount of water **Inhalation/Smoke/Gas/ Toxic Substance:** Move patient to safe environment 100% O_2 via mask Consider transport to facility with Hyperbaric chamber **?Tricyclic OD:** Hyperventilate **Contamination with commercial grade ("low level") radioactive material:** Patients with mild injuries may be decontaminated (removal of contaminated clothing, brushing off of material) prior to treatment and transport. Decontamination proceedings SHALL NOT delay treatment and transport of patients with significant or life-threatening injuries. Treatment of significant injuries is *always* the priority.	Monitor EKG/ O_2 Saturation prn IV SO adjust prn **Ingestions:** Charcoal 50Gm PO (excluding isolated alcohol, heavy metal, caustic agents, hydrocarbons or iron ingestion) SO. Assure patient has gag reflex and is cooperative **Symptomatic ?opioid OD (*excluding opioid dependent pain management patients*):** Narcan 2mg IVP/direct IVP/IM SO. MR SO If patient refuses transport, give additional Narcan 2 mg IM SO **Symptomatic ?opioid OD in opioid dependent pain management patients:** Narcan titrate 0.1 mg up to 2mg IVP/direct IVP or IM BHO. MR BHO **Symptomatic Organophosphate poisoning:** Atropine 2mg IVP/IM MR q 3-5min x2 SO. MR q3-5" prn BHO **OR** Atropine 4mg ET SO. MR q 3-5 min x2 SO. MR q3-5" prn BHO **Extrapyramidal reactions:** Benadryl 50mg slow IVP/IM SO **?Tricyclic OD with cardiac effects (i.e., hypotension, heart block, widened QRS, or PVC's):** $NaHCO_3$ 1mEq/kg IVP BHO

Approved:

EMS Medical Director

SUBJECT: TREATMENT PROTOCOL -- **Date: 7/1/04**
PRE-EXISTING MEDICAL INTERVENTIONS

BLS	ALS
Proceed with transport when person responsible for operating the device (the individual or another person) is able to continue to provide this function during transport. Previously established electrolyte and/or glucose containing peripheral IV lines: Maintain at preset rates Turn off when indicated Previously applied dermal medication delivery systems: Remove dermal NTG when indicated (CPR, shock) SO Previously established IV medication delivery systems and/or other preexisting treatment modalities with preset rates: If the person responsible for operating the device is unable to continue to provide this function during transport, contact the BH for direction. BH may ONLY direct BLS personnel to 1. Leave device as found OR turn the device off; THEN, 2. Transport patient OR wait for ALS arrival. Transports to another facility or to home: No wait period is necessary for routine oral/dermal medications or completed aerosol treatments. Check for prior IV, IM, SC, and non-routine PO medication delivery to assure minimum wait period of 30". If there is a central line, the tip of which lies in the central circulation, the catheter MUST be capped with a device which occludes the end. IV solutions with added medications OR other ALS treatment/monitoring modalities require ALS personnel (or RN/MD) in attendance during transport.	**Previously established electrolyte and/or glucose containing IV solutions**: Adjust rate or d/c BHO **Previously applied topical medication delivery systems**: Remove dermal NTG when indicated SO Remove other dermal medications *BHPO* **Pre-existing external vascular access (considered to be IV TKO):** To be used for definitive therapy ONLY **Previously established and labeled IV medication delivery systems with preset rates and/or other preexisting treatment modalities:** d/c BHO **If no medication label or identification of infusing substance:** d/c SO

Note: Consider early base hospital contact.

Approved:

EMS Medical Director

SUBJECT: TREATMENT PROTOCOL -- RESPIRATORY DISTRESS **Date: 7/1/04**

BLS	ALS
Ensure patent airway Reassurance O_2 and/or ventilate prn **Hyperventilation:** Coaching/reassurance Remove patient from causative environment. Consider underlying medical problem. **Toxic Inhalation (CO exposure, smoke gas, etc.):** Consider transport to facility with hyperbaric chamber **Known asthmatics:** Consider oral hydration **Respiratory Distress with croup-like cough:** Aerosolized Saline or Water 5ml via oxygen powered nebulizer/mask. MR prn	Monitor EKG/ O_2 Saturation prn IV SO, adjust prn Intubate SO prn NG prn per SO **Respiratory Distress with Rales (?cardiac origin):** **If BP ≥ 100 systolic**: NTG 0.4mg SL SO. MR x2 q3-5" SO. MR q3-5" BHO NTG ointment 1" SO Lasix 40mg or double daily dose to maximum of 100mg IVP SO. MR to maximum of 100 mg total dose BHO MS 2-4 mg IVP SO. MR to max of 10mg SO MR to max of 20 mg BHO **If BP < 100 systolic:** NTG 0.4mg SL per BHO. MR *BHPO* Lasix 40mg or double daily dose to maximum of 100mg IVP BHO. MR to maximum of 100 mg total dose BHO MS 2-4mg IVP BHO. MR to max of 20mg BHO **Respiratory Distress with Bronchospasm (?respiratory etiology):** Albuterol 6ml 0.083% via nebulizer SO. MR SO Atrovent 2.5ml 0.02% via nebulizer SO added to first dose of Albuterol **If severe respiratory distress with bronchospasm or inadequate response to Albuterol/Atrovent consider:** If no known cardiac history and < 55yo: Epinephrine 0.3mg 1:1000 SC SO. MR in 10" SO (total 3 doses) If KNOWN cardiac history and/or ≥ 55yo: Epinephrine 0.3mg 1:1000 SC BHO. MR in 10" BHO (total 3 doses)

Note: If any patient has taken Viagra/Sifenadil/Levitra or other medications for erectile dysfunction within 36 hours, NTG is contraindicated.
If patient on Bumex, give 100 mg of Lasix.

Approved:

EMS Medical Director

SUBJECT: TREATMENT PROTOCOL -- SEXUAL ASSAULT **Date: 7/1/04**

BLS /ALS

Ensure patent airway

0_2 and/or ventilate prn

Advise patient not to bathe or change clothes

Consult with Law Enforcement on scene for evidence collection

If the patient requires a medical evaluation, transport to the closest, most appropriate facility. Law enforcement will authorize and arrange an evidentiary exam after the patient is stabilized. If only evidentiary exam is needed, may release to law enforcement for transport to a SART facility.

Approved:

EMS Medical Director

SUBJECT: TREATMENT PROTOCOL -- SHOCK **Date: 7/1/04**

BLS	ALS
Shock: O_2 and/or ventilate prn Control obvious external bleeding Treat associated injuries NPO, anticipate vomiting Trendelenburg Remove transdermal NTG patch	Monitor EKG/ O_2 Saturation prn **Shock: Hypovolemic:** IV 500 ml fluid bolus SO. MR to maintain BP 90 systolic SO **Shock: Normovolemia (anaphylactic shock, neurogenic shock):** IV wide open SO Dopamine 400mg/250 ml at 5-40mcg/kg/min, titrate BP=100-120 systolic BHO **Shock (? cardiac etiology, septic shock):** IV 250 ml fluid bolus with clear lungs SO. MR to maintain BP of 90 systolic SO Dopamine 400mg/250 ml at 5-40 mcg/kg/min, titrate BP=100-120 systolic BHO

Approved:

EMS Medical Director

SUBJECT: TREATMENT PROTOCOL -- TRAUMA **Date: 7/1/04**

BLS	ALS
Ensure patent airway, protecting C-spine Spinal immobilization prn O_2 and/or ventilate prn Control obvious bleeding **Abdominal Trauma:** Cover eviscerated bowel with saline pads **Chest Trauma:** Cover open chest wound with three-sided occlusive dressing; release dressing if ?tension pneumothorax develops. **Extremity Trauma:** Splint neurologically stable fractures as they lie. Use traction splint as indicated. Grossly angulated long bone fractures with neurovascular compromise may be reduced with gentle unidirectional traction for splinting per BHO. **Impaled Objects:** Immobilize & leave impaled objects in place. Remove *BHPO* **Exception**: may remove impaled object in face/cheek, or from neck if there is total airway obstruction. **Neurological Trauma (head and spine injuries):** Ensure adequate oxygenation without hyperventilating patient. **Pregnancy of ≥ 6mo:** Where spinal immobilization precaution is indicated, tilt on spine board 30 degrees, left lateral decubitus. **Traumatic Arrest:** CPR. d/c BHPO	Monitor EKG/ O_2 Saturation prn IV SO adjust prn IV 500 ml fluid bolus SO. MR to maintain BP 90 systolic SO Treat pain as per Pain Management Protocol (S-141) **Crush Injury:** IV Rate 1.5L/hr when extremity released BHO $NaHCO_3$ 1mEq/kg IVP BHO **Grossly angulated long bone fractures** Reduce with gentle unidirectional traction for splinting SO **Impaled Objects:** Remove impaled object in face/cheek or neck if ventilation compromised SO **Severe Respiratory Distress with unilateral absent breath sounds and systolic BP < 90 in intubated or positive pressure ventilated patients:** Needle thoracostomy BHO **Traumatic Arrest:** Consider pronouncement at scene *BHPO*

TRANSPORT GUIDELINES:

Routine Disposition-Pediatric patients who meet criteria outlined in T-460 "Identification of the Pediatric Trauma Center Candidate" should be delivered to the Designated Pediatric Trauma Center, EXCEPT in the following situations:

1. **Adult + Child:**
   a. If there is a single ambulance (air/ground) with both a pediatric trauma center candidate AND an adult trauma center candidate, the ambulance should first deliver the more critical patient to the appropriate facility. If both patients are critical, or if there are other questions, both may be delivered to the designated adult trauma center.
   b. Field personnel should consider splitting the team using additional ALS transport vehicles, or aeromedical resources to transport the pediatric patient to pediatric trauma facility and the adult to the catchment area trauma facility.
2. **Bypass/Diversion:** If the designated pediatric trauma center is "on bypass", pediatric trauma candidates should be delivered to the Level I adult designated trauma facility (UCSD).

Approved:

EMS Medical Director

SUBJECT: TREATMENT PROTOCOL -- **Date: 7/1/04**
TRIAGE, MULTIPLE PATIENT INCIDENT

BLS/ALS

A. One person will assume responsibility for all scene medical communication

B. Only one (1) BH will be contacted during the entire incident including during transport

C. Prehospital providers will utilize Simple Triage and Rapid Transport (START) guidelines to determine priorities of treatment and transport

D. If staffing resources are limited, CPR need not be initiated for arrest victims, however, if CPR has been initiated prior to arrival of ALS personnel or briefly during assessment, discontinue only if one of the following occurs or is present*:

1) subsequent recognition of obvious death SO
2) BHPO
3) presence of Advance Health Care Directive, DNR Form/Order or Medallion SO
4) lack of response to brief efforts in the presence of any other potentially salvageable patient requiring intervention SO

E. If a paramedic team is split, contact the BH to confirm destination prior to leaving or ASAP enroute SO
(If a paramedic team is split, each paramedic may still perform ALS duties)

F. Radio communication for multi-patient incident need only include the following on each patient:
1. patient number assignment (i.e., #1, #2 . . .)
2. age
3. sex
4. mechanism
5. chief complaint
6. abnormal findings
7. treatment initiated
8. ETA, destination, and transporting unit number

G. Radio Communication for Annex D activation need only include the following on each patient:
1. patient number if assigned (i.e., #1, #2 . . .)
2. triage category (Immediate, Delayed, Minor)
3. destination
4. transporting unit number

* Reference Policy S-402 Prehospital Determination of Death

Approved:

EMS Medical Director

SUBJECT: TREATMENT PROTOCOL -- PAIN MANAGEMENT **Date: 7/1/04**

BLS	ALS
Assess level of pain using standardized pain scale provided below Ice, immobilize and splint when indicated Elevation of extremity trauma when indicated	**Pain score assessment of < 5:** Continue to monitor and reassess pain as appropriate **For treatment of pain score assessment of ≥ 5 with *BP* ≥ 100 systolic:** MS 2-10mg in 2-4 mg increments IVP to max of 10mg SQ MR to max of 20mg BHO **OR** MS 5mg IM SQ. MR to max of 10mg BHO **OR** MS 10mg PO SQ. MR to max of 30mg BHO

Note: These orders may be implemented after the paramedic assesses the level of pain and determines if patient agrees to treatment. ALL patients with a traumatic or pain-associated chief complaint will have a paramedic assessment of level of pain using a standardized pain scale. All patients will be offered treatment for pain, unless contraindicated, and level of pain relief will be assessed after each treatment is given and prior to the end of the run.
The parenteral dose relative strength of MS is three times the oral dose of MS.

Approved:

EMS Medical Director

SUBJECT: ALS/BLS NERVE AGENT TREATMENT PROTOCOL **Date: 7/1/04**

BLS / ALS

BLS

Upon identification of a scene involving suspected or known exposure of nerve agent:

Isolate Area

Notify dispatch of possible Mass Casualty Incident with possible Nerve Agent involvement.

DO NOT ENTER AREA

If exposed:
Blot off agent
Strip off all clothing
Flush area with large amounts of water
Cover affected area

If you begin to experience signs/symptoms of nerve agent exposure:
- Increased secretions (tears, saliva, runny nose, sweating)
- Diminished vision
- SOB
- Nausea, vomiting diarrhea
- Muscle twitching/weakness

Notify the Incident Commander (or dispatch if no IC) immediately of your exposure and declare yourself a patient

Self Treat Immediately per the following Acuity Guidelines:

Potential:
No signs & symptoms
Monitor

Mild:
Miosis, rhinorrhea, increasing SOB, fasiculations, sweating
Atropine Autoinjector (or 2 mg) IM
2-PAM Cl Autoinjector (or 600 mg) IM

ALS

MMST Designated Personnel:
Triage, decontaminate and treat patient based on severity of victim SO

Potential:
No signs & symptoms
Monitor

Mild:
Miosis, rhinorrhea, increasing SOB, fasiculations, sweating
Atropine Autoinjector (or 2 mg) IM
2-PAM Cl Autoinjector (or 600 mg) IM

Moderate:
Miosis, rhinorrhea, SOB/wheezing, increased secretions, fasiculations, muscle weakness, GI effects
Atropine Autoinjector (or 2 mg) IM, MR x1 in 5-10"
2-PAM Cl Autoinjector (or 600 mg) IM, MR x1 in 5-10"
Valium Autoinjector (or 10 mg) IM*

Severe:
Unconscious, seizures, flaccid, apnea
Initial dosing:
Atropine Autoinjector (or 2 mg) IM X 3 doses in succession
2-PAM Cl Autoinjector (or 600 mg) IM X 3 doses in succession
Versed 10mg IM for seizure activity
O_2/Intubate.
Ongoing treatment:
Atropine Autoinjector (or 2 mg) IM, MR q3-5" until secretions diminish
2-PAM Cl Autoinjector (or 600 mg) IM, MR x1 in 3-5"
For continuous seizure activity MR Versed 10 mg IM x1 in 10"

Pediatric doses:

Weight	Atropine	2-PAM Cl	Versed
<20kg	0.5mg	100mg	2.5mg
20-39kg	1mg	300mg	5.0mg
≥40kg	2mg	600mg	10mg

For doses less than the amount in the Autoinjector, use the medication vial and administer with a syringe.

Consider: For frail, medically compromised, hypertensive or patients with renal failure administer half doses of Atropine and 2PAM Cl

*** Valium Autoinjectors will be utilized only by MMST personnel for self-administration for seizure control. The Valium Autoinjectors will be prescribed for individual team members by the MMST Physicians.**

Approved:

EMS Medical Director

SUBJECT: PEDIATRIC TREATMENT PROTOCOL -- AIRWAY OBSTRUCTION **Date: 7/1/04**

BLS	ALS
For a conscious patient: Reassure, encourage coughing O_2 prn 5 Abdominal thrusts only if complete airway obstruction. MR prn (Chest thrusts in obesity/pregnancy) If patient becomes unconscious OR has a decreasing LOC: 5 Abdominal thrusts if complete airway obstruction. MR prn If patient is unconscious when found: Attempt to ventilate. (Reposition prn) 5 Abdominal thrusts. MR prn NOTE: 5 Chest thrusts and back blows for infants <1 year. MR prn Once obstruction is removed: High flow O_2, ventilate prn NOTE: If suspected epiglottitis: Place patient in sitting position Do not visualize the oropharynx STAT transport	**If patient becomes unconscious or has a decreasing LOC**: Direct laryngoscopy and Magill forceps SO. MR prn **Once obstruction is removed:** Monitor EKG/O_2 Saturation prn IV SO adjust prn

Note: If unable to secure airway, transport STAT while continuing abdominal thrusts.

Approved:

EMS Medical Director

SUBJECT: PEDIATRIC TREATMENT PROTOCOL -- **Date: 7/1/04**
ALTERED NEUROLOGIC FUNCTION (NON TRAUMATIC)

BLS	ALS
Ensure patent airway, O_2 and/or ventilate prn. Spinal immobilization when indicated. Secretion problems, position on affected side. Do not allow patient to walk. Restrain prn. **Hypoglycemia (suspected):** If patient is awake and has gag reflex, give oral glucose paste or tabs. Patient may eat or drink if able. If patient is unconscious, NPO **Seizures:** Protect airway, and protect from injury Treat associated injuries Spinal immobilization prn If febrile, remove excess clothing/covering **Behavioral Emergencies:** Restrain only if necessary to prevent injury. Avoid unnecessary sirens Consider law enforcement support	IV SO adjust prn Monitor EKG/ O_2 Saturation /blood glucose prn **Symptomatic ?opioid OD (*excluding opioid dependent pain management patients):*** Narcan per drug chart direct IVP/IV/IM SO. MR SO **Symptomatic ? opioids OD in opioid dependent pain management patients:** Narcan titrate per drug chart IVP/IV/IM (dilute IV dose to 10ml with NS) BHO. MR BHO **Hypoglycemia:** Symptomatic known diabetic unresponsive to oral agents: D_{25} per drug chart IVP SO if BS <75mg/dl (Infant <60mg/dl) or blood sugar unobtainable If no IV: Glucagon per drug chart IM SO if BS <75mg/dl (Infant <60mg/dl) or unobtainable Symptomatic unknown diabetic unresponsive to oral agents D_{25} per drug chart IVP SO if BS <75mg/dl (Infant <60mg/dl) D_{25} per drug chart IVP BHO if BS unobtainable If no IV: Glucagon per drug chart IM SO if BS <75mg/dl (Infant <60mg/dl) Glucagon per drug chart IM BHO if BS unobtainable **Seizures:** For: A. Ongoing generalized seizure lasting ≥5" SO B. Focal seizure with respiratory compromise SO C. Recurrent seizures without lucid interval SO GIVE: Versed per drug chart slow IVP, (d/c if seizure stops) SO. MR x1 in 10" SO **If no IV** Versed per drug chart IM SO. MR x1 in 10" SO For: prolonged focal seizure without respiratory compromise GIVE: Versed per drug chart slow IVP (d/c if seizure stops) BHO. MR x1in 10" BHO **If no IV** Versed per drug chart IM BHO. MR x1 in 10" BHO

Approved:

EMS Medical Director

SUBJECT: TREATMENT PROTOCOL **Date: 7/1/04**
PEDIATRIC ALS-ALLERGIC REACTION

BLS	ALS
Ensure patent airway	Monitor EKG/ O_2 Saturation prn
0_2 and/or ventilate prn	IV SO adjust prn
Remove sting/injection mechanism	Benadryl per drug chart IVP/IM SO
May assist patient to self medicate own prescribed medication **ONE TIME ONLY**. Base Hospital contact required prior to any repeat dose.	**Any** respiratory distress with bronchospasm: Albuterol per drug chart via nebulizer SO. MR SO Atrovent per drug chart added to first dose of Albuterol via nebulizer SO
Latex Sensitive Patients Should be managed in a latex safe environment without compromising patient care. Prehospital personnel should inform the receiving facility personnel at the time of transfer if they become aware that the patient is latex sensitive. See Latex Safe Equipment List (S-105).	**Severe** respiratory distress with bronchospasm **OR** **Exposure** to known allergen with previous severe reaction and onset of any allergic symptoms (e.g. urticaria, swelling, etc.): Epinephrine 1:1,000 per drug chart SC SO. MR x 2 q10" (total of 3 doses) SO **Anaphylaxis (shock or cyanosis):** Epinephrine 1:1000 per drug chart SC SO. MR x 2 q10" (total of 3 doses) SO IV/IO fluid bolus per drug chart SO. MR BHO Epinephrine 1:10,000 per drug chart IVP BHO. MR BHO **OR** Epinephrine 1:1000 per drug chart ET BHO. MR BHO

Approved:

EMS Medical Director

SUBJECT: PEDIATRIC TREATMENT PROTOCOL -- DYSRHYTHMIAS **Date: 7/1/04**

Treat dysrhythmias ONLY if they have potential to or are causing symptoms of decreased cardiac output.

BLS	**ALS**
Assess level of consciousness	Monitor EKG/ O_2 Saturation prn
Determine peripheral pulses	IV/IO SO adjust prn
Ensure patent airway, ventilate prn	A. **Unstable Bradycardia:** Heart rate: Infant/Child (<9 yrs) <60 bpm Child (9-14yrs) <40bpm
If pt. ≥ 1 year, pulseless and unconscious, and AED is available, may use.	Ventilate per BVM for 30 seconds, then reassess HR prior to compressions and drug therapy. Epinephrine 1:10,000 per drug chart IVP/IO SO. MR q 3-5" BHO **OR** Epinephrine 1:1000 per drug chart ET SO. MR q3-5 BHO
Start CPR when heart rate indicates and patient is unstable: Heart rate: Infant/Child (<9 yrs) <60 bpm Child (9-14yrs) <40bpm	If age ≥30 days: Atropine per drug chart IV/IO/ET SO. MR X 1 in 5" SO
Unstable Dysrhythmia: Includes heart rate as above and any of the following: A. Poor Perfusion (cyanosis, delayed capillary refill, mottling) **OR** B. Altered LOC, Dyspnea or BP <[70+ (2 x age)] **OR** C. Diminished or Absent Peripheral Pulses	B. **Supraventricular Tachycardia** <4yrs ≥240bpm ≥4yrs ≥200bpm VSM per SO. MR SO Adenosine per drug chart rapid IVP. *BHPO* follow with 20ml NS IVP If no sinus pause: Adenosine per drug chart rapid IVP. *BHPO* follow with 20ml NS IVP If no sinus pause, MR x1 *BHPO* Versed per drug chart slow IVP prn precardioversion per *BHPO* Synchronized cardioversion per drug chart (monophasic/biphasic) *BHPO*. MR per drug chart *BHPO*
Note: ?dehydration may cause tachycardias up to 200/min.	

Approved:

EMS Medical Director

Treat dysrhythmias ONLY if they have potential to or are causing symptoms of decreased cardiac output.

BLS	ALS
As above	C. **VF/pulseless VT:** Defibrillate per drug chart (monophasic/biphasic). MR prn SO Intubate SO NG prn SO Epinephrine 1:10,000 per drug chart IVP/IO MR x2 in 3-5" SO. MR q3-5" BHO **OR** Epinephrine 1:1000 per drug chart ET, MR x2 in 3-5" SO. MR q3-5" BHO **OR** Epinephrine 1:1000 per drug chart (diluted to 20ml) ETAD-esophageal via port 1 (blue) SO. MR q5" BHO Lidocaine per drug chart IVP/IO SO. MR x2 q3- 5" SO **OR** Lidocaine per drug chart ET SO. MR x2 q3-5" SO D. **Post conversion VT/VF with pulse ≥ 60 (including witnessed spontaneous conversion, precordial thump, AED & AICD). If initial dose already given, continue with repeat doses as appropriate.** Lidocaine per drug chart IVP/IO SO. MR x2 q8-10" SO **OR** Lidocaine per drug chart ET SO. MR x2 q8-10" SO E. **Pulseless Electrical Activity:** Intubate SO NG prn SO Epinephrine 1:10,000 per drug chart IVP/IO. MR x2 in 3-5" SO. MR q3-5 min. BHO **OR** Epinephrine 1:1000 per drug chart ET. MR x2 in 3-5"SO. MR q3-5" BHO **OR** Epinephrine 1:1000 per drug chart (diluted to 20ml) ETAD-esophageal via port 1 (blue) SO. MR q5" BHO **? Hypovolemia:** IV fluid bolus per drug chart SO. MR SO

Note: For patients in nonperfusing rhythms, consider early Base Hospital contact for disposition/pronouncement at scene.
For patients in nonperfusing rhythms, flush line with NS after medication administration

Approved:

EMS Medical Director

Treat dysrhythmias ONLY if they have potential to or are causing symptoms of decreased cardiac output.

BLS	ALS
As Above	F. **Asystole:** Intubate SO NG prn SO Epinephrine 1:10,000 per drug chart IVP/IO MR x2 in 3-5" SO. MR q3-5" BHO **OR** Epinephrine 1:1000 per drug chart ET SO. MR x2 in 3-5" SO. MR q3-5" BHO **OR** Epinephrine 1:1000 per drug chart (diluted to 20ml) ETAD-esophageal via port 1 (blue) SO. MR q5" BHO Pronouncement at scene or transport *BHPO*

Note: For patients in nonperfusing rhythms, flush line with NS after medication administration.

Approved:

EMS Medical Director

SUBJECT: TREATMENT PROTOCOL -- ENVENOMATION INJURIES-PEDIATRICS **Date: 7/1/04**

BLS	ALS
O_2 and/or ventilate prn **Jellyfish Sting:** Rinse with alcohol; do not rub or apply pressure **Stingray or Sculpin Injury:** Heat as tolerated **Snakebites:** Mark proximal extent of swelling Keep involved extremity at heart level and immobile	IV SO adjust prn Treat pain as per Pain Management Protocol (S-173)

Approved:

EMS Medical Director

BLS	ALS
Ensure patent airway O_2 and/or ventilate prn **Ingestions:** Identify substance Consider transport LEFT side for ingestions **Skin:** Remove clothes and brush off, or rinse substance with copious amounts of water **Inhalation of Smoke/Gas/Toxic Substance:** Move patient to safe environment 100% O2 via mask Consider transport to facility with Hyperbaric chamber **?Tricyclic OD:** Hyperventilate	Monitor EKG/ O_2 Saturation prn IV SO adjust prn **Ingestions:** Charcoal per drug chart PO SO (excluding isolated alcohol, heavy metals, hydrocarbons, caustic agents or iron ingestion). Assure child has gag reflex and is cooperative. **Symptomatic ?opioid OD (*excluding opioid dependent pain management patients):*** Narcan per drug chart direct IVP/IV/IM SO. MR SO **Symptomatic ? opioid OD in opioid dependent pain management patients:** Narcan titrate per drug chart direct IVP/IV (dilute IV dose to 10 ml with NS) or IM BHO. MR BHO **Symptomatic organophosphate poisoning:** Atropine per drug chart IVP/IM/ET SO. MR q3-5" x2 SO. MR q3-5" prn BHO **Extrapyramidal reactions:** Benadryl per drug chart slow IVP/IM SO **? Tricyclic OD with cardiac effects (hypotension, heart block, widened QRS or PVC's):** $NaHCO_3$ per drug chart IVP x1 BHO

Approved:

EMS Medical Director

SUBJECT: PEDIATRIC TREATMENT PROTOCOL -- NEWBORN DELIVERIES **Date: 7/1/04**

BLS

Suction baby's airway, first mouth, then nose, when head is delivered and prn
Ensure patent airway
O_2, ventilate 100% O2 prn
Clamp and cut cord between clamps following delivery
Keep warm and dry (wrap in warm, dry blanket)
APGAR at 1" and 5"
Document time of delivery and who cut the cord

Premature and/or Low Birth Weight Infants:
If amniotic sac intact, remove infant from sac
STAT transport
When HR <100bpm, ventilate 100% O_2
If HR <60 bpm after 30 seconds of ventilation, start CPR.
CPR need NOT be initiated if there are no signs of life AND:
a) weight <500Gm OR,
b) gestational age is <24 weeks, OR,
c) eyelids are fused closed.

Meconium delivery with respiratory distress:
Additional vigorous suctioning and BVM ventilation may be necessary.
If mechanical suction is used, keep pressure between 80 and 100cm H_20, otherwise use bulb syringe.

Cord wrapped around neck:
Slip the cord over the head and off the neck; clamp and cut the cord if wrapped too tightly.

Prolapsed cord:
Place the mother in shock position with her hips elevated on pillows, or knee chest position. Insert a gloved hand into the vagina and gently push the presenting part off the cord. TRANSPORT STAT WHILE RETAINING THIS POSITION. DO NOT REMOVE HAND UNTIL RELIEVED BY HOSPITAL PERSONNEL.

Breech Birth:
Allow infant to deliver to the waist without active assistance (support only); when legs and buttocks are delivered, the head can be assisted out. If head does not deliver within 1-2 min, insert a gloved hand into the vagina and create an airway for the infant. Transport STAT if head undelivered.

ALS

Monitor O_2 Saturation prn
Ventilate 100% O_2 if HR<100 bpm

If HR remains <60 bpm after 30 seconds of ventilation:
CPR and Intubate SO
NG prn SO

If HR remains <60 bpm after 30 seconds of CPR:
Epinephrine 1:10,000 per drug chart IVP/IO SO. MR q 3-5" BHO
OR
Epinephrine 1:1000 per drug chart ET SO. MR q3-5 BHO

Premature and low birth weight infants:
Monitor EKG

Disposition: Direct to Labor/Delivery area per BHO.
Note: If time allows, place identification bands on mother and infant.

Approved:

EMS Medical Director

SUBJECT: PEDIATRIC TREATMENT PROTOCOL -- RESPIRATORY DISTRESS **Date: 7/1/04**

BLS	ALS
Ensure patent airway Dislodge any airway obstruction Transport in position of comfort Reassurance O_2 and/or ventilate prn **Hyperventilation:** Coaching/reassurance. Remove patient from causative environment. Consider ?organic problem. **Toxic Inhalants (CO exposure, Smoke, Gas, etc.):** Move patient to safe environment 100% O2 via mask Consider transport to facility with hyperbaric chamber **Respiratory Distress with croup-like cough:** Aerosolized saline or water 5ml via oxygen powered nebulizer/mask. MR prn	Monitor EKG/ O_2 Saturation IV SO adjust prn Intubate SO prn **Respiratory Distress with Bronchospasm:** Albuterol per drug chart via nebulizer SO. MR SO Atrovent per drug chart via nebulizer SO added to first dose of Albuterol **If severe respiratory distress with bronchospasm or inadequate response to Albuterol/Atrovent consider:** Epinephrine 1:1,000 per drug chart SC SO. MR q10"x 2 SO (total of 3 doses) **Respiratory Distress with Stridor:** Epinephrine 1:1,000 per drug chart via nebulizer SO

Note: If history suggests epiglottitis, do NOT visualize airway; utilize calming measures.

Approved:

EMS Medical Director

SUBJECT: PEDIATRIC TREATMENT PROTOCOL -- SHOCK **Date: 7/1/04**

BLS	ALS
Ensure patent airway, 0_2 and assist ventilation Control hemorrhage Determine peripheral pulses and capillary refill Assess level of consciousness .	Monitor EKG/O_2 Saturation IV/IO SO **Shock: Hypovolemia:** IV/IO fluid bolus per drug chart SO. MR to maintain BP≥ [70 + (2x age)] SO **Shock: Normovolemia (anaphylactic shock, neurogenic shock):** IV/IO fluid bolus per drug chart SO. MR BHO if lungs clear

Approved:

EMS Medical Director

SUBJECT: TREATMENT PROTOCOL -- TRAUMA-PEDIATRICS **Date: 7/1/04**

BLS	ALS
Ensure patent airway, protecting C-spine Spinal immobilization prn O_2 and/or ventilate prn Control obvious bleeding **Abdominal Trauma:** Cover eviscerated bowel with saline pads **Chest Trauma:** Cover open chest wound with three-sided occlusive dressing; release dressing if ?tension pneumothorax develops. **Extremity Trauma:** Splint neurologically stable fractures as they lie. Use traction splint as indicated. Grossly angulated long bone fractures with neurovascular compromise may be reduced with gentle unidirectional traction for splinting **BHO**. **Impaled Objects:** Immobilize & leave impaled objects in place. Remove *BHPO* **Exception**: may remove impaled object in face/cheek, or from neck if there is total airway obstruction. **Neurological Trauma (Head & Spine Injuries):** Assure adequate airway and ventilate without hyperventilation. **Traumatic Arrest:** CPR. d/c *BHPO*	Monitor EKG/ O_2 Saturation prn IV/IO SO adjust prn IV fluid bolus per drug chart for hypovolemic shock SO. MR to maintain BP≥ [70 + (2x age)] SO Treat pain as per Pain Management Protocol S-173 **Crush Injury:** IV fluid bolus per drug chart when extremity released **BHO** $NaHCO_3$ drug chart IVP **BHO** **Extremity Trauma:** Grossly angulated long bone fractures may be reduced with gentle unidirectional traction for splinting per SO **Impaled Objects:** Remove impaled object in face/cheek or neck if ventilation compromised SO **Severe Respiratory Distress (with unilateral absent breath sounds AND BP < [70 + (2 x age)] in intubated or positive pressure ventilated patients):** Needle thoracostomy **BHO** **Traumatic Arrest:** Consider pronouncement at scene *BHPO*

TRANSPORT GUIDELINES:

Routine Disposition-Pediatric patients who meet criteria outlined in T-460 "Identification of the Pediatric Trauma Center Candidate" should be delivered to the Designated Pediatric Trauma Center, EXCEPT in the following situations:

1. **Adult + Child:**
   a. If there is a single ambulance (air/ground) with both a pediatric trauma center candidate AND an adult trauma center candidate, the ambulance should first deliver the more critical patient to the appropriate facility. If both patients are critical, or if there are other questions, both may be delivered to the designated adult trauma center.
   b. Field personnel should consider splitting the team using additional ALS transport vehicles, or aeromedical resources to transport the pediatric patient to pediatric trauma center and the adult to the catchment area adult trauma center.

Bypass/Diversion: If the designated pediatric trauma center is "on bypass", pediatric trauma candidates should be delivered to UCSD.

Approved:

EMS Medical Director

SUBJECT: TREATMENT PROTOCOL - BURNS-PEDIATRICS **Date: 7/1/04**

BLS	ALS
Move to a safe environment Break contact with causative agent Ensure patent airway O_2 and/or ventilate prn Treat other life threatening injuries **Thermal Burns:** Burns of <10% BSA, cool with non-chilled saline or water For burns of ≥10% BSA, cover with dry dressing and keep warm Do not allow patient to become hypothermic **Chemical Burns:** Flush with copious water Brush off dry chemicals **Tar Burns:** Cool with water, transport; do not remove tar.	Monitor EKG/ O_2 Saturation for significant electrical injury and prn IV SO adjust prn **For patients with ≥10% 2nd degree or ≥5% 3rd degree burns:** **5-14 yo**: IV NS 250 ml/hr SQ **<5 yo:** IV NS 150 ml/hr SQ Treat pain as per Pain Management Protocol S-173 **In the presence of respiratory distress with bronchospasm:** Albuterol per drug chart via nebulizer SQ. MR SQ Atrovent per drug chart via nebulizer SQ added to first dose of Albuterol

Base Hospital Contact and Transport (Per S-415):
Will be made to UCSD Base Hospital for patients meeting burn center criteria:

BURN CENTER CRITERIA
Patients with burns involving:
- ≥ 10% BSA 2nd degree or ≥ 5% BSA 3rd degree
- suspected respiratory involvement or significant smoke inhalation in a confined space
- significant injury of the face, hands, feet, perineum or circumferential
- significant electrical injury due to high voltage (greater than 110 volts)

Disposition:
Hyperbaric chamber for suspected CO poisoning

Approved:

EMS Medical Director

SUBJECT: TREATMENT PROTOCOL -- PEDIATRIC ALS - CARDIAC ARREST (UNMONITORED NON-TRAUMATIC) **Date: 7/1/04**

BLS	ALS
Ensure patent airway Ventilate CPR If pt. ≥ 1 year, pulseless and unconscious and AED is available, may use.	**When no monitor available:** Consider early Base Hospital contact for disposition/pronouncement at scene Ventilate per BVM x 30 seconds, then reassess HR prior to drug therapy Defibrillate SO prn Monitor O_2 Saturation prn IV/IO SO adjust prn Intubate SO NG prn SO Epinephrine 1:10,000 per drug chart IVP/IO SO. MR x2 in 3-5" SO MR q3-5" BHO **OR** Epinephrine 1:1000 per drug chart ET SO. MR x2 q3-5" SO. MR q3-5" BHO **OR** Epinephrine 1:1000 per drug chart (diluted to 20ml) ETAD-esophageal port 1 (blue) SO. MR BHO For nonperfusing patients, flush line with NS after administration of each medication

Approved:

EMS Medical Director

SUBJECT: PEDIATRIC TREATMENT PROTOCOL –
ALTE (Apparent Life Threatening Event) * See note **Date: 7/1/04**

BLS	ALS
Ensure patent airway 0_2 and/or ventilate prn. If parent/guardian refuses transport: contact Base Hospital	Monitor EKG/ O_2 Saturation prn Monitor blood glucose prn Transport all cases that meet ALTE criteria to the nearest appropriate Emergency Department

Note: An Apparent Life-Threatening Event is an episode involving an infant less than 12 months of age which includes one or more of the following:

1) Apnea
2) Color change (cyanosis, pallor)
3) Marked change in muscle tone (limpness or stiffness)
4) Unresponsiveness

Most of these infants will have a normal exam in the field but many will have a serious condition that needs to be assessed by a physician. Obtain detailed description/history of the event that triggered the 9-1-1response.

Approved:

EMS Medical Director

SUBJECT: PEDIATRIC TREATMENT PROTOCOL – PAIN MANAGEMENT **Date: 7/1/04**

BLS ALS

Assess level of pain Immobilize/splint when indicated Ice/elevation when indicated	**Pain score assessment of < 5*:*** Continue to monitor and reassess pain as appropriate. **For treatment of pain score assessment of ≥ 5 with *BP ≥ [70 + (2x age in years)]*:** MS IV per drug chart SQ MR per drug chart BHO **OR** MS IM per drug chart SQ. MR per drug chart BHO **OR** MS PO per drug chart SQ. MR per drug chart BHO

Note: These orders may be implemented after the paramedic assesses the level of pain and determines if patient/DDM agrees to treatment.
ALL patients with a traumatic or pain-associated chief complaint will have a paramedic assessment of level of pain using a standardized pain scale. All patients will be offered treatment for pain, unless contraindicated, and level of pain relief will be assessed after each treatment is given and prior to the end of the run.
The parenteral dose relative strength of MS is three times the oral dose of MS.

Approved:

EMS Medical Director